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MEDICAL SOCIETY

ELEMENTS

OF

MATERIA MEDICA

AND

PHARMACY.

ELEMENTS

OF

MATERIA MEDICA

AND

PHARMACY:

BY

J. MURRAY,

LECTURER ON CHEMISTRY, AND ON MATERIA MEDCIA
AND PHARMACY.

IN TWO VOLUMES.

VOL. II.

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NOTICE.

In the pharmaceutical part of this work, I have adopted the arrangement of the Pharmacopœia of the Edinburgh College, and have adhered ſtrictly to its nomenclature, and to the details of its proceſſes. To convey a knowledge, however, of Pharmacy as it is practiſed in this country, it is neceſſary likewiſe to take notice of the preparations of the London Pharmacopœia; and the plan I have followed, while it avoids that tedious and generally uſeleſs repetition which ariſes from giving a complete tranſlation of the proceſſes of both Pharmacopœias, anſwers the moſt important purpoſes ſuch a tranſlation could ſerve. Wherever the *formula* of the *London* Pharmacopœia, for any preparation, differs in no eſſential point from that in the *Edinburgh*, I have thought it ſufficient to indicate merely the name given to it in the former, in a marginal note. But where there is any important difference, either in proportion, compoſition, or mode of conducting the proceſs, I have deemed it proper to introduce it in the text. And to the end of each chapter, I have added thoſe preparations which are peculiar to the London Pharmacopœia, or have none correſponding to them in the publication of the Edinburgh College.

J. M.

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PART III.

PHARMACY.

CHAP. I.

PREPARATIONS OF SOME SIMPLE MEDICINES.

CARBONAS CALCIS PRÆPARATUS, *olim Creta Præparata et Cancrorum Lapilli, vulgo Oculi Cancrorum Præparati.* PREPARED CARBONAT OF LIME, formerly Prepared Chalk, and Prepared Crabs Stones, commonly called Crabs Eyes.

Cancrorum Chelæ.
Creta.

" CARBONAT of Lime, whether the ſofter variety, commonly named Chalk, or the harder, called Crabs Stones and Crabs Eyes, after being rubbed to powder in an iron mortar, and levigated with a little water on a porphyry ſtone, is to be put into a large veſſel. Water is to be poured upon it, and after the veſſel has been frequently agitated, it is to be poured off, loaded with a fine powder. On the water remaining at reſt, a ſubtile powder ſubſides, which is to be dried. The coarſe powder which the water could not ſuſpend, is to be again levigated, and treated in the ſame manner."

CHALK is a native carbonat of lime, ſeldom perfectly pure. The crabs ſtones are concretions found in the ſtomach of the river crawfiſh, (Cancer Aſtacus), conſiſting of carbonat of lime, with a portion of animal gelatin. By the above proceſs, both are reduced to a very fine powder, to render them more fit for medicinal uſe. They are employed as antacids in a doſe of one or two drachms.

RED CORAL, (Corallium Rubrum), is ordered to be prepared in a ſimilar manner in the London Pharmacopœia. As it has no qualities but thoſe of carbonat of lime, there is no neceſſity for retaining it in the liſts of the Materia Medica.

Ferri Rubigo.

Carbonas ferri præparatus, *olim Rubigo Ferri Præparata.* Prepared carbonat of iron, formerly Prepared Ruſt of Iron.

"Purified Filings of Iron are to be frequently moiſtened with water till they fall into ruſt, which is to be rubbed to a fine powder."

During expoſure to air and moiſture, iron is oxydated, and this oxyd is found to be combined with carbonic acid, abſorbed probably from the atmoſphere. As a chalybeate it is more active than the pure metal, and more mild than the other ſaline combinations of iron. Its doſe is from 10 to 20 grains.

Lapis Calaminaris.

Carbonas zinci impurus præparatus; *olim Lapis Calaminaris Præparatus.* Prepared impure carbonat of zinc, formerly Prepared Calamine Stone.

"Impure Carbonat of Zinc roaſted by thoſe who make braſs, is to be prepared in the ſame manner as carbonat of lime."

Calamine is an ore of zinc, in which ſometimes the metal is merely oxydated, and in

other

other varieties combined with carbonic acid. It is uſed as an application to ſuperficial inflammation, duſted on the part, and as the baſis of the common healing cerate. For theſe purpoſes, it requires to be very finely levigated.

FERRI LIMATURA PURIFICATA. PURIFIED FILINGS OF IRON.

"A ſieve being placed over the filings, let a magnet be applied, that the filings may be drawn through the ſieve upwards."

THE iron is in this manner obtained nearly pure, the interpoſition of the ſieve in a great meaſure preventing particles of other metals, or impurities which are generally mixed with the iron-filings got from the workſhops, from being entangled in the cluſter which adheres to the magnet. The proceſs is a very neceſſary one, where iron is to be medicinally employed in this form, or where it is to ſerve for other preparations of this metal.

FERRI OXIDUM NIGRUM PURIFICATUM, *olim Ferri Squamæ Purificatæ.* PURIFIED BLACK OXYD OF IRON, formerly Purified Scales of Iron.

"Let the ſcales of black oxyd of iron, which are found at the anvils of the workmen, be purified by the application of the magnet; for the magnet attracts only the more ſmall and pure ſcales, leaving thoſe which are larger and leſs pure."

THE ſcales of iron are the ſmall fragments ſtruck off from the metal when it is heated red-hot. Paſſing through the atmoſphere, at this temperature, they are oxydated, but ſo imperfectly, as to admit of this mode of purification by the magnet. They are uſed only in making ſome of the other chalybeate preparations.

OXIDUM ZINCI IMPURUM PRÆPARATUM, *olim Tutia Præparata.* PREPARED IMPURE OXYD OF ZINC, formerly Prepared Tutty. Tutia.

"To be prepared as Carbonat of Lime."

Tutty is a ſubſtance of which the origin is doubtful, but it appears to be artificial, and to conſiſt chiefly of oxyd of zinc with argillaceous earth. It is uſed externally for the ſame purpoſes as calamine; and hence requires to be finely levigated.

Alumen Uſtum.

Sulphas aluminæ exsiccatus, *olim Alumen Uſtum*. Dried sulphat of argil, formerly Burnt Alum.

"Let Sulphat of Argil be melted in an earthen or iron veſſel, and expoſed to the heat applied until it ceaſe to boil."

By this proceſs the alum loſes its water of cryſtallization, and becomes more active as an eſcharotic, for which purpoſe this preparation is uſed.

Flores Sulphuris Lot.

Sulphur sublimatum lotum. Washed sublimed sulphur.

"Take of Sublimed Sulphur one pound; Water four pounds: boil the ſulphur a little with the water, then pour off this water; by the affuſion of cold water waſh away all acid; laſtly, dry the ſulphur."

A SMALL portion of ſulphur in its ſublimation ſometimes ſuffers oxydation from the air of the chamber into which it is ſublimed, and hence acquires a ſlight acidity, which the preſent proceſs is deſigned to remove. This is ſo rarely the caſe, however, that it is one perhaps unneceſſary.

SULPHUR PRÆCIPITATUM. *Pharm. Lond.* PRECIPITATED SULPHUR.

"Take of Sulphurated Kali (Sulphuret of Potaſh), ſix ounces; diſtilled water, one pound and a half; diluted vitriolic (ſulphuric) acid, as much as is ſufficient; boil the ſulphurated kali in the diſtilled water until it is diſſolved. Filter the liquor through paper, and add to it the diluted vitriolic acid. Waſh the precipitated powder by repeated affuſions of water until it become inſipid."

IN this proceſs, ſulphur is firſt combined with potaſh by fuſion; and this compound, diſſolved in water, is decompoſed by ſulphuric acid, which combines with the potaſh, and precipitates the ſulphur. It might be ſuppoſed, therefore, to have no advantage. The ſulphur, however, from its ſtate of aggregation, is of a much whiter colour than it can be obtained by any other means, and is therefore preferable in forming an ointment for external application.

Antimonium præparat.

SULPHURETUM ANTIMONII PRÆPARATUM, *olim Antimonium Præparatum.* PREPARED SULPHURET OF ANTIMONY, formerly Prepared Antimony.

"Let Sulphuret of Antimony be prepared in the ſame manner as Carbonat of Lime."

IT has been ſuppoſed, that this ſubſtance, when finely levigated, as it is by this proceſs, acts with more certainty than when given in a coarſer powder. It is ſtill, however, very inactive. As a remedy in chronic rheumatiſm, it has been given in a doſe of 5 or 10 grains daily.

MEL DESPUMATUM. CLARIFIED HONEY.

"Liquefy honey by a water-bath, and remove the ſcum."

THIS is deſigned to render honey more pure, by removing completely the wax and other impurities it may contain, and which, when it is rendered liquid by heat, riſe to the ſurface. It is ſeldom performed.

HERBARUM ET FLORUM EXSICCATIO. DRYING OF HERBS AND FLOWERS.

Herb. et Flor. Exſiccat.

" Herbs and Flowers are to be dried with the gentle heat of a ſtove, or a common fire, in ſuch a quantity that the drying may be done as quickly as poſſible; for thus their virtues are beſt preſerved. The mark of this is their retaining completely their native colour. The leaves of hemlock, and others containing a ſubtile volatile matter, are, immediately after drying, to be rubbed to powder, and kept in glaſs veſſels well ſtopt."

By drying herbs and flowers, or expelling a great part of the water they contain, thoſe chemical changes they would ſpontaneouſly ſuffer are prevented, and they are rendered capable of being preſerved. The more quickly they are dried, they retain in general their virtues more completely. Care muſt be taken at the ſame time that too much heat be not applied, as part of their volatile principles would be diſſipated, and their medicinal qualities impaired. Even when dried, they ſuffer ſome changes in keeping, probably from the action of the air; and ſome do ſo more than others. Hemlock has its colour and odour impaired in a very ſhort time; it is therefore neceſſary to exclude it from the air, and likewiſe from expoſure to light.

Scill. Exſiccat.

SCILLA MARITIMA EXSICCATA. DRIED SEA SQUILL.

"Cut the root of the ſea ſquill, its outer covering having been removed, tranſverſely into thin ſlices, and dry it by a gentle heat. The mark of its being properly dried is, that although rendered friable it retains its bitterneſs and acrimony."

BY drying, the ſquill loſes four-fifths of its weight, and with very little diminution of its virtues, if too much heat has not been applied. It is in this ſtate that ſquill is commonly employed in medicine. Doſe from 1 to 3 grains.

Pulparum Præparatio.

PULPARUM EXTRACTIO. EXTRACTION OF PULPS.

"Boil thoſe fruits which afford a pulp, if unripe, or if ripe and dry, with a little water, that they may become ſoft. Then expreſs the pulp through a hair-ſieve, and boil it with a gentle heat in an earthen veſſel, ſtirring it frequently that it may not burn, until it attain the conſiſtence of honey. The pulp of Caſſia Fiſtula is to be boiled from the bruiſed pod; and by evaporating the water, to be reduced to the due conſiſtence. The pulps of ripe and freſh fruits are to be preſſed through a ſieve, without previous boiling."

These directions are given principally for the preparation of the pulps of ſeveral fruits, which enter into the compoſition of the Electuary of Senna. Pulps are ſeldom otherwiſe medicinally employed, and cannot be long preſerved unchanged.

Under the Chapter correſponding with this in title in the London Pharmacopœia, are ſeveral additional preparations, of which it may be neceſſary to take notice.

Ammoniaci purificatio. Purification of gum ammoniac.

" If ammoniac ſeem not pure, boil it in water, until it ſoften; and by a preſs, force it through an hempen bag; then put it aſide, that the reſinous matter may ſubſide. Evaporate the water, mixing towards the end of the evaporation the reſinous with the gummy part.

"Aſſafœtida and other ſimilar gum-reſins may be purified in the ſame manner.

"Any gum alſo, which melts eaſily, ſuch as Galbanum, may be purified by putting it into an ox-bladder, and keeping it in boiling-water, till it become ſo ſoft that it may be preſſed through a ſtrong linen-cloth, and freed from its impurities."

By ſuch proceſſes, the qualities of the ſubſtances are always injured, and they are unneceſſary, ſince theſe gums, when not ſufficiently pure, ought not to be uſed.

STYRACIS PURIFICATIO. PURIFICATION OF STORAX.

"Having diſſolved Storax in alkohol, ſtrain the liquor, and diſtil it with a gentle heat to a proper conſiſtence."

This is equally unneceſſary with the preceding.

CORNU CURVI USTIO. BURNING OF HARTSHORN.

"Burn pieces of hartſhorn till they become perfectly white, then rub them to a very fine powder."

ANIMAL bones conſiſt of gelatin with phoſphat of lime; by burning, the former is deſtroyed, the latter remains. It was conſidered as an antacid, but it cannot be referred to that claſs. It is ſometimes an ingredient in dentifrice compoſitions.

MILLEPEDÆ PRÆPARATIO. PREPARATION OF MILLEPEDES.

"Suſpend ſlaters, incloſed in a thin linen-bag, over proof-ſpirit, heated in a cloſe veſſel, that they may be killed by the vapour, and rendered friable."

IT is ſingular that this abſurd preparation ſhould have been ſo long retained in our Pharmacopœias as it has been.

SPONGIÆ USTIO. BURNING OF SPONGE.

"Bruiſe ſponge cut into ſmall pieces, and, when freed from ſtony matter, burn it in a cloſe iron veſſel until it become black and friable. Then rub it into a fine powder."

BURNT ſponge conſiſts chiefly of carbonaceous matter, with a ſmall portion of carbonat of ſoda. It has been celebrated as a remedy in ſcrofula, in a doſe of a ſcruple or half a drachm.

CHAP. II.

CONSERVÆ.—CONSERVES.

IN theſe preparations, vegetable matter bruiſed is mixed with about three times its weight of ſugar, and beat into an uniform pulpy maſs. It was ſuppoſed that the ſugar, by its antiſeptic quality, would prevent the decompoſition of the vegetable matter. This, however, is not the caſe. This form of preparation, therefore, is not applied to any active medicine, the few conſerves that are retained being employed merely as vehicles for other medicines, and for giving them convenient forms. The conſerves in the Edinburgh Pharmacopœia are the following:

Conſerv. Aurantii Hiſ. cort. exter.

CONSERVA *Corticis exterioris recentis fructûs* CITRI AURANTII, *Radulâ abraſi:* Conſerve of the Outer Rind of the Orange raſped by a Grater.

ter. CONSERVA *Fructûs* ROSÆ CANINÆ *maturi, a ſeminibus eorumque pube ſollicitè purgati:* Conſerve of the Fruit of Dog-hips carefully freed from the Seeds and included Down. CONSERVA *Petalorum* ROSÆ GALLICÆ *nondum explicitorum:* Conſerve of the Unblown Petals of the Red Roſe. In each of theſe, the vegetable ſubſtance is beat into a pulp, adding gradually, during the beating, three times its weight of ſugar.—To theſe the London College add, CONSERVA ABSINTHII MARITIMI, Conſerve of Sea Wormwood; CONSERVA LUJULÆ, Conſerve of Wood Sorrel; CONSERVA ARI, Conſerve of Arum; CONSERVA PRUNI SYLVESTRIS, Conſerve of Sloes; CONSERVA SCILLÆ, Conſerve of Squill; —preparations which ſcarcely require any particular notice. To the firſt the form of conſerve is very ill adapted; and in the laſt, the active matter of the ſquill cannot be preſerved long by this preparation.

Conſerv. Cynoſbati.

Conſerv. Roſæ rubræ.

CHAP. III.

CHAP. III.

SUCCI.—JUICES.

VEGETABLE Juices are obtained by expreſſion. They conſiſt of various proximate principles of the plant, particularly of mucilage, extractive matter, tannin, fecula, and ſome ſaline ſubſtances diſſolved or ſuſpended in water, and when recent, may poſſeſs the medicinal virtues which belong to any of theſe principles. It is impoſſible, however, to preſerve vegetable matter in ſolution in water for any length of time without ſuffering decompoſition; and hence juices are unfit for officinal preparations. Only one is retained in the Edinburgh and London Pharmacopœias, and it might have been diſcarded.

Succus Cochlea. com.

SUCCUS COCHLEARIÆ OFFICINALIS COMPOSITUS.

COMPOUND JUICE OF SCURVY-GRASS.

"Take of Juice of Scurvy-Graſs, Juice of Water-Creſſes expreſſed from freſh-gathered herbs, Juice of the Fruit of the Orange, of each two pounds; Spirit of Nutmeg half a pound: mix and put aſide until the impurities have ſubſided; then pour off the liquor."

THIS juice was at one time celebrated as a remedy in ſcurvy, from 4 to 8 ounces being taken twice or thrice a-day; but ſince the powers of the citric acid have been fully aſcertained, it is very ſeldom preſcribed, and is never kept in the ſhops.

CHAP. IV.

CHAP. IV.

SUCCI SPISSATI, vulgo EXTRACTA.—INSPISSATED JUICES, commonly termed EXTRACTS.

WHERE the virtues of any vegetable reſide in a principle which is contained in the juice obtained from it by expreſſion, and where this principle is at the ſame time not volatile, inſpiſſation by a moderate heat will contribute to its preſervation, as the ſoft maſs obtained by this proceſs is much leſs liable to chemical changes than when the reaction of its conſtituent parts is favoured by dilution with water. The preparation, however, is ſtill liable to diſadvantages. By the heat employed in the inſpiſſation, part of its active matter is generally diſſipated, and another ſource of injury is derived from the oxygenation which the extract is liable to ſuffer when thus heated in contact with the atmoſpheric air; and the preparation itſelf being ſtill ſoft and humid, muſt gradually undergo chemical alterations. Hence, inſpiſſated juices are generally variable in their medicinal qualities.

The proceſs for theſe preparations is deſcribed in the Edinburgh Pharmacopœia under the firſt of them,

SUCCUS SPISSATUS ACONITI NAPELLI. INSPISSATED JUICE OF ACONITE OR WOLFSBANE.

"The freſh leaves of the aconite are to be bruiſed, and being incloſed in an hempen bag, are to be preſſed ſtrongly, that they may give out their juice, which is to be reduced by evaporation in open veſſels, heated by boiling water ſaturated with muriat of ſoda, to the conſiſtence of thick honey. The maſs, after it has cooled, is to be kept in glazed earthen veſſels, and moiſtened with alkohol."

This inſpiſſated juice is the form under which wolfsbane has been uſually adminiſtered. It has been given principally in obſtinate chronic rheumatiſm, in a doſe of half a grain night and morning, and gradually increaſed to 5 or 6 grains.

In the ſame manner are prepared the following Inſpiſſated Juices from the leaves of their reſpective plants.

SUCCUS SPISSATUS ATROPÆ BELLADONNÆ. INSPISSATED JUICE OF DEADLY NIGHT-SHADE.

THIS has been recommended in ſcirrhus and ſome convulſive affections, in a doſe of one grain, gradually increaſed.

SUCCUS SPISSATUS CONII MACULATI. INSPISSATED JUICE OF HEMLOCK.

Succus Spiſſat. Cicutæ.

UNDER this form, hemlock was employed by Störck in ſcirrhus and cancer. The doſe given is at firſt two grains, but it can be largely increaſed, and has at length been taken to the extent of ſeveral drachms in the day. In the preparation of it, the narcotic power of the hemlock ſeems always to be more or leſs impaired, and it is injured by keeping. It is, therefore, uncertain with regard to ſtrength, more ſo, perhaps, than the dried leaves of the plant.

SUCCUS SPISSATUS HYOSCYAMI NIGRI. INSPISSATED JUICE OF BLACK HENBANE.

THIS plant reſembling opium in its powers, has been employed frequently as a ſubſtitute for it. The doſe is one grain, which requires, if continued, to be increaſed.

SUCCUS SPISSATUS LACTUCÆ VIROSÆ. INSPISSATED JUICE OF STRONG-SCENTED LETTUCE.

THIS preparation was recommended as a remedy in dropſy by the German practitioners, in a doſe of 4 or 5 grains, gradually increaſed to 1 or 2 drachms in twenty-four hours. It has been little uſed in this country.

Succ. Spiſſat. Baccæ Samb,

SUCCUS SPISSATUS SAMBUCCI NIGRÆ, *vulgo Rob Sambuci.* INSPISSATED JUICE, or Rob of Elder.

THE preparation of this is peculiar. "Five pounds of the juice of Elder Berries, and one pound of Sugar, are to be boiled with a gentle heat to the conſiſtence of thick honey."

IT has been given as an aperient or moderate laxative and diuretic in a doſe of half an ounce, or one ounce. It poſſeſſes no quality to recommend it. In the preparation of it in the London Pharmacopœia, it is merely inſpiſſated without ſugar.

SUCCUS SPISSATUS MOMORDICÆ ELATERII, *vulgo Elaterium.* INSPISSATED JUICE OF WILD CUCUMBER, or Elaterium. Elaterium.

"CUT the ripe fruit of the wild cucumber, and paſs through a very fine hair-ſieve the juice lightly expreſſed; boil it a little, and ſet it aſide for ſome hours until the thicker parts ſubſide. Pour off the thinner part which floats above, and ſeparate the reſt by ſtraining. The thicker part which remains after the ſtraining, being covered with a linen cloth, is to be dried by a gentle heat."

THIS is not, properly ſpeaking, an inſpiſſated juice, but is conſidered rather as a fecula. It is a very violent cathartic, operating powerfully in a doſe of one or two grains. It has been uſed as a hydragogue in dropſy, and as a cathartic in obſtinate conſtipation, where others have failed. The violence, and in ſome meaſure the uncertainty of its operation, prevent its frequent uſe.

The additional preparations of this kind in the London Pharmacopœia are Succus spissatus ribis nigri, Inspissated juice of black currant, and Succus spissatus lemonis, Inspissated juice of lemon, which require no particular obſervation.

CHAP. V.

OLEA FIXA.—FIXED OILS.

THE chemical properties of theſe oils have already been deſcribed. They exiſt unmixed in the fruit and ſeeds of vegetables, and are obtained by expreſſion, or decoction with water. The former is in general to be preferred; and to afford the oil pure it muſt be performed without heat, which, though it favours the ſeparation of the oil, communicates to it an unpleaſant flavour. To preſerve them from becoming rancid, they ought to be kept ſecluded from the air.

A proceſs in pharmacy ſomewhat difficult is to mix theſe oils with any watery fluid, ſo that they may be conveniently exhibited. It is uſually done by the medium of mucilage, or of an alkali. If triturated with mucilage, and a ſmall quantity of ſugar, the oil is diffuſed through the water, and a milky liquor formed. A combination ſtill more permanent is effected, by adding a few drops of water of ammonia, or 2 or 3 grains of carbonat of potaſh.

THE directions for preparing theſe oils in the Edinburgh Pharmacopœia, are given under the OIL OF ALMONDS.

Oleum Amygdalæ.

OLEUM AMYGDALÆ COMMUNIS.

"Take of Freſh Almonds any quantity. Bruiſe them in a ſtone-mortar, incloſe them in a hempen bag, and expreſs the oil by a preſs without heat."

THE oil thus obtained is the pureſt of the expreſſed oils, being entirely free from odour or taſte, and is uſed for the general medicinal purpoſes of expreſſed oils.

Ol. e ſemin. Lini.

IN the ſame manner is to be expreſſed OLEUM LINI USITATISSIMI, OIL OF LINTSEED, from the ſeeds of the plant. Being rather leſs pure, it is uſed only as an external application.

To theſe the London College add OLEUM RICINI, CASTOR OIL, and OLEUM SINAPEOS, OIL OF MUSTARD. The former is uſually prepared, however, in the Weſt Indies by decoction, and is milder than when obtained by expreſſion; and the latter is ſcarcely applied to any uſe. The olive oil, which of all the expreſſed oils is moſt largely employed, is imported from the South of Europe.

CHAP. VI.

CHAP. VI.

EMULSIONES.—EMULSIONS.

EMULSIONS are preparations in which the expreſſed oil of ſeeds or kernels is ſuſpended in water by the medium of the mucilage, and perhaps alſo of the fecula which the ſeeds contain. They are always opaque and milky: as the oil is merely diffuſed through the water, it gradually collects and riſes to the ſurface: and owing to the vegetable matter diſſolved in the liquor, they are alſo liable to become ſour. They likewiſe ſuffer decompoſition from vinous ſpirits or acids.

* * *

EMULSIO AMYGDALÆ COMMUNIS. ALMOND EMULSION. Lac Amygdalæ.

"Take of Sweet Almonds one ounce; Water two pounds and an half; beat the blanched almonds carefully in a ſtone-mortar, adding the water gradually, then ſtrain."

THIS is uſed merely as a demulcent in catarrh and gonorrhœa, or during the application of a bliſter, being drunk *ad libitum*.

EMULSIO GUMMI MIMOSÆ NILOTICÆ, *vulgo Emulſio Arabica*. ARABIC EMULSION.

“ THIS is made in the ſame manner, adding, while beating the almonds, two ounces of mucilage of gum Arabic.”

IT is uſed in the ſame caſes as the preceding, and is ſuppoſed to have a greater ſhare of demulcent power.

EMULSIO CAMPHORATA. CAMPHOR EMULSION.

“ Take of Camphor one ſcruple; blanched Sweet Almonds two drachms; Refined Sugar one drachm; Water ſix ounces: to be made in the ſame manner as the Almond Emulſion.”

CAMPHOR is leſs apt to induce nauſea when given in a liquid than when in a ſolid form; and this is one of the beſt forms of preparation. Its doſe is two ounces.

CHAP. VII.

INFUSA.—INFUSIONS.

INFUSION is a term employed in Pharmacy, to denote that operation in which water on remaining for ſome time on vegetable matter diſſolves part of it; and alſo to expreſs the preparation which reſults from that operation. It is obvious, that infuſion, underſtood in this ſenſe, can be applied with propriety only to thoſe plants whoſe virtues depend on principles ſoluble in water. The ſtrength of the infuſion is conſiderably influenced by the temperature of the fluid, hot water diſſolving more of the ſoluble matter than cold, while cold water, from this circumſtance, frequently affords a preparation which, if weaker, is more grateful. From dried vegetables, the ſoluble matter is in general more eaſily obtained than from thoſe which are recent. Infuſions are alway extemporaneous preparations;

preparations, and cannot be preſerved in a ſound ſtate for more than a few days.

* * *

INFUSUM CINCHONÆ OFFICINALIS. INFUSION OF PERUVIAN BARK.

"Take of Powdered Peruvian Bark, one ounce; Water, one pound. Macerate them for twenty-four hours, and ſtrain."

By ſimple infuſion, water is capable of diſſolving only a ſmall portion of the active matter of bark. This preparation is uſed principally in dyſpepſia, in a doſe of two ounces occaſionally.

INFUSUM DIGITALIS PURPUREÆ. INFUSION OF FOXGLOVE.

"Take of the dried leaves of Foxglove, one drachm; Boiling-water, eight ounces; Spirit of Cinnamon, one ounce. Macerate for four hours, and ſtrain."

Infusion is the form under which Dr Withering, who introduced the uſe of digitalis in dropſy, recommended it to be given. The doſe is half an ounce taken twice a-day, and gradually ly increaſed till the effects of the remedy appear.

INFUSUM GENTIANÆ LUTEÆ COMPOSITUM, *vulgo Infuſum Amarum.* COMPOUND INFUSION OF GENTIAN.

Infuſum gentianæ compoſitum.

"Take of Gentian Root, half an ounce; Dried Orange-peel, one drachm; Coriander Seeds, half a drachm; Diluted alkohol, four ounces; Water, one pound. Firſt pour on the alkohol, and after three hours the water; then macerate without heat for twelve hours, and ſtrain."

THIS bitter infuſion is employed in dyſpepſia, and is much better adapted to continued uſe than the bitter tinctures. Its doſe is two ounces occaſionally.

INFUSUM MIMOSÆ CATECHU, *vulgo Infuſum Japonicum.* INFUSION OF CATECHU.

"Take of Extract of Catechu, two drachms and a half; Bark of Cinnamon, half a drachm; Boiling Water, ſeven ounces; Simple Syrup, one ounce. Macerate the extract and bark with the water in a cloſed veſſel for two hours, then ſtrain, and add the ſyrup."

The Extract of Catechu is completely ſoluble in water. This preparation, therefore, poſſeſſes all its virtues uninjured, and rendered more grateful, by the addition of the cinnamon. Its principal uſe is in diarrhœa. Its doſe, one ounce every third or fourth hour.

INFUSUM RHEI PALMATI. INFUSION OF RHUBARB.

" Take of the Root of Rhubarb, half an ounce; Boiling Water, eight ounces; Spirit of Cinnamon, one ounce. Macerate the root with the water in a cloſed veſſel for twelve hours, then, adding the ſpirit, ſtrain the liquor."

The infuſion of rhubarb is ſuppoſed to have more of the purgative than of the aſtringent power. It is accordingly uſed as a mild cathartic. Doſe, two ounces.

Infuſ. roſæ.

INFUSUM ROSÆ GALLICÆ. INFUSION OF RED ROSE.

" Take of the Dried Petals of the Red Roſe, two ounces; Boiling Water, five pounds; Sulphuric Acid, one drachm; Refined Sugar, two ounces. Macerate the petals with the boiling water in an earthen veſſel, which is not glazed with lead, for four hours; then having poured on the acid, ſtrain the liquor, and add the ſugar."

THIS infuſion is uſed principally as a moderately aſtringent gargle, in ſlight caſes of cynanche. It owes little elſe than colour, and a pleaſant flavour, to the petals of the roſe; the aſtringency depending almoſt entirely on the ſulphuric acid.

INFUSUM TAMARINDI INDICÆ CUM CASSIA SENNA. INFUSION OF TAMARIND AND SENNA.

"Take of the Prepared Fruit of the Tamarind, one ounce; Senna Leaves, one drachm; Coriander Seeds, half a drachm; Unrefined Sugar, half an ounce; Boiling Water, eight ounces: Macerate them in a cloſe earthen veſſel, which is not glazed with lead, ſhaking frequently, and after four hours ſtrain the liquor. It may be made alſo with double or triple the quantity of ſenna."

THIS combination affords a very pleaſant purgative, mild in its operation. The whole quantity may be taken at intervals as a doſe. If we wiſh a more powerful cathartic, it muſt be made with an increaſed proportion of ſenna.

In the London Pharmacopœia are two infuſions, both of Senna. The firſt, Infusum sennæ simplex, (prepared from Senna, an ounce and a half; Ginger, one drachm; and Boiling Diſtilled Water, one pint; macerated for an hour, and ſtrained), is given as a cathartic, in a doſe to an adult from two to four ounces. The ſecond, Infusum sennæ tartarisatum, is prepared, from Senna, one ounce and a half; Coriander Seeds bruiſed, half an ounce; Acidulous Tartrite of Potaſh, two drachms; and Diſtilled Water, one pint; the Cryſtals of Tartar being diſſolved in the water by boiling, and the hot liquor being poured on the ſenna and coriander: the maceration being continued for an hour, in a covered veſſel, and ſtrained when cold. It is ſimilar to the infuſion of ſenna and tamarinds, rather leſs pleaſant, but having the recommendation of cheapneſs. From the larger proportion of ſenna it is alſo more active. Doſe from two to four ounces.

UNDER the Chapter entitled *Infuſa*, in the Edinburgh Pharmacopœia, are ſeveral preparations which cannot properly be ranked as infuſions. The firſt is an example of a Mixture.

POTIO CARBONATIS CALCIS, *olim Potio Cretacea.*

Miſt. Cretacea.

CHALK POTION.

" Take of Prepared Carbonat of Lime, one ounce; Refined Sugar, half an ounce; Mucilage of Gum Arabic, two ounces. Rub them together, and add gradually of Water, two pounds and a half; Spirit of Cinnamon, two ounces."

THE chalk in this mixture is merely ſuſpended by the mucilage. It is uſed as an antacid, one or two ounces being taken occaſionally.

WITH this may be noticed a few Mixtures which find a place in the London Pharmacopœia.

MISTURA CAMPHORATA. CAMPHORATED MIXTURE.

"Take of Camphor, one drachm; Rectified Spirit of Wine, a little; Refined Sugar, half an ounce; Boiling Diſtilled Water, one pint. Rub the camphor with the ſpirit, afterwards with the ſugar; add the water gradually, and ſtrain the mixture."

THE uſe of boiling water in this mixture is injudicious, as it volatilizes part of the camphor, and as it diſſolves it in leſs proportion than when cold. It is given as a ſtimulant, in the doſe of one ounce every ſecond or third hour, in fever accompanied with debility.

MISTURA MOSCHATA. MUSK MIXTURE.

"Take of Muſk, two ſcruples; Powdered Gum Arabic, Refined Sugar, of each one drachm; Roſe Water, ſix ounces. Rub the muſk with the ſugar, then with the gum, and add the roſe water gradually."

THIS is a convenient form for the exhibition of muſk. The doſe is one ounce, or an ounce and a half.

LAC AMMONIACI. MILK OF GUM AMMONIAC.

"Take of Gum Ammoniac, two drachms; Diſtilled Water, half a pint: Triturate the gum-reſin with the water poured on gradually, until it become an emulſion."

IN this mixture the reſin and oily matter is ſuſpended in the water by the medium of the gum, and a milky-like fluid formed, from which the reſin gradually ſubſides. It is given as an expectorant, in a doſe from half an ounce to an ounce at a time.

LAC ASSAFOETIDÆ.

THIS is prepared in the ſame manner. It is the reſin of the aſſafœtida ſuſpended by the intervention of the gum. In hyſteria, it is given in a doſe of half an ounce or an ounce, frequently repeated during the paroxyſm.

MUCILAGO AMYLI. STARCH MUCILAGE. *Phar. Ed.*

Mucilago Amyli.

"Take of Starch, half an ounce; Water, one pound. Rub the ſtarch, adding gradually the water; then boil them for a ſhort time."

Fecula, of which wheat-ſtarch is a variety, is ſoluble in boiling water, and forms a gelatinous ſolution. This ſtarch-mucilage is principally uſed as a vehicle for giving opium, or other remedies, under the form of enema.

Mucilago Tragacanthæ.

MUCILAGO ASTRAGALI TRAGACANTHÆ. MUCILAGE OF GUM TRAGACANTH.

"Take of Gum Tragacanth beat to powder, one ounce; Boiling Water, eight ounces. Macerate for twenty-four hours, and rub the gum carefully, that it may be diſſolved; then ſtrain it through linen."

This gum gives a very viſcid conſiſtence to water; the mucilage, with the above proportion, is gelatinous, and is uſed principally in making troches.

Mucilago Arabici Gummi.

MUCILAGO MIMOSÆ NILOTICÆ. MUCILAGE OF GUM ARABIC.

"Take of Powdered Gum Arabic, one part; Boiling Water, two parts. Digeſt with frequent agitation until the gum be diſſolved; then ſtrain through linen."

This is the mucilage that is uſually employed for pharmaceutic purpoſes ; ſuch as ſuſpending ſubſtances inſoluble in water, rendering oils miſcible with watery liquors, &c. It is alſo uſed as a demulcent.

MUCILAGO SEMINUM CYDONII MALI. *Lond.*

MUCILAGE OF QUINCE SEED.

" Take of Quince Seeds, one drachm ; Diſtilled Water, eight ounces. Boil with a gentle heat for ten minutes, and ſtrain through linen."

This mucilage is little employed, having no particular advantage, and being liable to ſpontaneous decompoſition. [illegible]

AQUA CALCIS. LIME WATER.

Aq. Calcis.

" Take of Lime recently prepared, half a pound : Put it into an earthen veſſel, and ſprinkle it with four ounces of water, keeping the veſſel cloſed while the lime becomes hot, and falls into powder ; then pour on twelve pounds of water, and mix the lime with it by agitation. After the lime has ſubſided, repeat the agitation ; and do ſo about ten times, keeping the veſſel always ſhut, that the free acceſs of the air may be prevented. Let the water be ſtrained through paper, interpoſing between the filter and the funnel glaſs-rods, that the water may paſs through as quickly as poſſible. Let it be kept in bottles well ſtopt."

The caution to exclude the air in this proceſs, ariſes from the ſuppoſition that the lime would combine rapidly with the carbonic acid of the atmoſphere. After the ſolution is ſtrained, it is at leaſt neceſſary that it ſhould be kept in veſſels well ſtopt. A very ſmall quantity only of lime is diſſolved, about two grains to the ounce. The ſolution has a ſtyptic taſte. It is uſed as a tonic and aſtringent. Doſe from one to two pounds daily.

Chap. VIII.

DECOCTA.—DECOCTIONS.

By *Boiling* vegetable ſubſtances in water, their active matter is more abundantly diſſolved than by ſimple infuſion. The preparation thus obtained is termed a Decoction.

In a number of caſes, part of the matter diſſolved by the aſſiſtance of the high temperature ſeparates as the liquor cools, eſpecially where it is of a reſinous matter; in others, however, it is retained.

Though a larger portion of matter is diſſolved by the water in this mode of preparation, yet it cannot be always advantageouſly employed. Wherever the virtues of the ſubſtance ſubjected to it depend, in whole or in part, on any volatile principle, they are neceſſarily injured by this being diſſipated. At the temperature of 212°, humid extractive matter combines too with oxygen from the atmoſpheric air; and perhaps at the ſame temperature, ſome vegetable principles ſuffer decompoſition from the re-action of their conſtituent parts: hence many vegetables ſuffer injury from boiling, even where this cannot be aſcribed to the diſſipation of their volatile parts. Theſe circumſtances limit conſiderably the application of this form of preparation.

Decoctions are always extemporaneous preparations. In general, during the boiling the air ſhould be excluded, and the liquor ought to be ſtrained while hot.

* * *

DECOCTUM ALTHÆÆ OFFICINALIS. DECOCTION OF ALTHÆA.

"Take of Dried Althæa Root, four ounces; Raiſins freed from their ſeeds, two ounces; Water, ſeven pounds. Boil to five pounds; put aſide the ſtrained liquor until the impurities have ſubſided, and pour off the clear liquor."

THE gum of vegetables is not injured by decoction. As the virtues of the althæa depend on this principle, they are obtained entire in this preparation. It is uſed as a demulcent, being taken *ad libitum.*

DECOCTUM ANTHEMIDIS NOBILIS, *vulgo Decoctum Chamæmeli ſive Commune.* DECOCTION OF CHAMOMILE, *or Common Decoction.*

" Take of the Dried Flowers of Chamomile, one ounce; Caraway Seeds, half an ounce; Water, five pounds. Boil for a quarter of an hour, and ſtrain."

THIS decoction is deſigned to be uſed principally as an enema and fomentation. Similar preparations are inſerted in the London Pharmacopœia, under the names of DECOCTUM PRO ENEMATE, and DECOCTUM PRO FOMENTO.

DECOCTUM CINCHONÆ OFFICINALIS, *vulgo Decoctum Corticis Peruviani.* DECOCTION OF PERUVIAN BARK.

Decoctum Cinchonæ.

" Take of Peruvian Bark in powder, one ounce; Water, one pound and a half. Boil for en minutes in a covered veſſel, and ſtrain the iquor while hot."

As the active part of Peruvian bark is chiefly reſino-extractive matter, part of it diſſolved by the hot water is depoſited as the liquor cools. Hence the neceſſity of ſtraining it while hot. As the ſame matter ſuffers oxygenation during boiling, the propriety is obvious of continuing the boiling for a ſhort time only, and in a cloſe veſſel. This decoction is given in general when bark in conſiderable doſes is requiſite, and where the powder does not remain on the ſtomach. The doſe is two ounces repeated occaſionally.

DECOCTUM DAPHNES MEZEREI. DECOCTION OF MEZEREON.

" Take of the Bark of the Root of Mezereon, two drachms; of Liquorice Root bruiſed, half an ounce; Water, three pounds. Boil with a gentle heat to two pounds, and ſtrain."

THE uſe of the liquorice is to cover the pungency of the mezereon. The decoction is given in a doſe of 6 or 8 ounces, three or four times a day, in the caſes in which mezereon is employed, principally in the ſecondary ſymptoms of ſyphilis.

DECOCTUM GEOFFRÆÆ INERMIS. DECOCTION OF CABBAGE-TREE BARK.

"Take of Cabbage-Tree Bark in powder, one ounce; Water, two pounds. Boil with a gentle heat to one pound, and ſtrain."

DECOCTION has been the form under which this medicine has been uſually exhibited. It is given as an anthelmintic in a doſe of two ounces to an adult.

DECOCTUM GUAJACI OFFICINALIS COMPOSITUM, *vulgo Decoctum Lignorum.* COMPOUND DECOCTION OF GUAIAC.

"Take of Guaiac Wood Shavings, three ounces; Raiſins, two ounces; Saſſafras Root, Liquorice Root, of each one ounce; Water, ten pounds. Boil the water with the guaiac wood, and raiſins, on a gentle fire, to five pounds, adding the roots towards the end of the boiling; then ſtrain without expreſſion."

UNDER this form guaiac wood is adminiſtered as a remedy in cutaneous diſeaſes, and ſometimes in chronic rheumatiſm. It is taken to the extent of two or three pounds daily.

Decoctum Hordei.

DECOCTUM HORDEI DISTICHI. DECOCTION OF BARLEY.

“ Take of Pearl Barley, two ounces; Water, five pounds. Firſt waſh off with cold water the flour adhering to the barley; then boil the barley for a ſhort time with about half a pound of water, to extract the colouring matter. This being rejected, put the barley thus purified into five pounds of boiling water. Boil this to one half, and ſtrain.”

THIS decoction is uſed merely as a diluent in febrile affections. A ſimilar formula, in which figs, raiſins and liquorice, are added to the barley, is inſerted in the London Pharmacopœia, under the title of DECOCTUM HORDEI COMPOSITUM.

DECOCTUM POLYGALÆ SENEGÆ. DECOCTION OF SENEKA.

“ Take of Seneka Root, one ounce; Water, two pounds. Boil to ſixteen ounces, and ſtrain.”

THIS has been uſed as a remedy in chronic rheumatiſm, and ſometimes as an expectorant in pneumonia. Its doſe is two or three ounces, three or four times a-day.

DECOCTUM SMILACIS SARSAPARILLÆ. DECOCTION OF SARSAPARILLA.

Decoctum Sarſaparillæ.

"Take of Sarſaparilla Root cut, ſix ounces; Water, eight pounds. Digeſt for two hours, in a temperature of about 195°, then take out the root and bruiſe it; put it again into the liquor, and boil it with a gentle fire to two pounds; then expreſs it, and ſtrain."

UNDER this form ſarſaparilla has been given in the ſecondary ſymptoms of ſyphilis. It is probably to be regarded only as belonging to the nutrientia, and as ſuch, when taken largely, it may be of ſome advantage. It has been given alſo in dyſuria.

A FEW decoctions which have a place in the London Pharmacopœia remain to be noticed.

DECOCTUM CORNU CERVI. DECOCTION OF HARTSHORN.

"Take of Burnt and Prepared Hartſhorn, two ounces; Gum Arabic, ſix drachms; Diſtilled

Water, three pounds. Boil, ſtirring conſtantly, to two pounds, and ſtrain."

THE burnt hartſhorn, conſiſting chiefly of phoſphat of lime, is inſoluble in water. In this uſeleſs preparation, therefore, the gum Arabic only is diſſolved.

DECOCTUM HELLEBORI ALBI. DECOCTION OF WHITE HELLEBORE.

" Take of White Hellebore Root in powder, one ounce; Diſtilled Water, two pints; Rectified Spirit of Wine, two ounces. Boil the water with the root to one pint; when the liquor is cold, ſtrain, and add the ſpirit."

THIS is uſed as an external application in ſome cutaneous diſeaſes, principally in pſora.

DECOCTUM SARSAPARILLÆ COMPOSITUM. COMPOUND DECOCTION OF SARSAPARILLA.

" Take of Sarſaparilla Root, ſlit and bruiſed, ſix ounces; Bark of Saſſafras Root, Shavings of Guaiac Wood, Liquorice Root bruiſed, of each one ounce; Mezereon, three drachms; Diſtilled Water, ten pints. Macerate with a gentle heat for ſix hours; boil to five pints, adding the mezereon

zereon towards the end of the boiling; then ſtrain."

This decoction is an improvement of the Liſbon Diet-Drink, once highly celebrated for its power in removing ſome of the ſecondary ſymptoms of ſyphilis, and promoting the action of mercury. Its doſe is four or ſix ounces three or four times a-day. From Dr Ruſſell's experiments, its efficacy appears to depend on the mezereon.

DECOCTUM ULMI. DECOCTION OF ELM.

" Take of the Bark of the Elm, freſh bruiſed, four ounces; Diſtilled Water, four pints. Boil to two pints, and ſtrain."

This decoction has been recommended as a remedy in cutaneous diſeaſes.

Chap. IX.

SYRUPI.—SYRUPS.

Syrups are ſolutions of ſugar in water either pure, or containing other ſubſtances diſſolved. They are ſeldom active medicines; but are principally deſigned to render others pleaſant. The proportion of ſugar with which they are generally made is about two parts to one of fluid.

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Syrupus simplex *ſive Communis.* Simple *or Common* Syrup.

"Take of Refined Sugar beat to powder, fifteen parts; Water, eight parts. Diſſolve the ſugar with a gentle heat, and boil a little ſo as to form a ſyrup."

This ſolution of ſugar is uſed merely to communicate ſweetneſs of taſte.

SYRUPUS ACIDI ACETOSI.

"Take of Acetous Acid, two pounds and a half; Refined Sugar, three pounds and a half. Boil ſo as to form a ſyrup."

THIS acidulous ſyrup being ſufficiently pleaſant, may enter into mixtures in which it cannot occaſion any chemical decompoſition.

SYRUPUS ALTHÆÆ OFFICINALIS. SYRUP OF ALTHÆA.

Syrup. Althææ.

"Take of Freſh Althæa Root cut, one pound; Water, ten pounds; Refined Sugar, four pounds. Boil the water with the root to one half, and expreſſing it ſtrongly, ſtrain. Put aſide the ſtrained liquor, that the impurities may ſubſide, and to the purified liquor add the ſugar; then boil it ſo as to form a ſyrup."

THE quantity of mucilage this ſyrup can contain is ſo trifling, that it cannot be conſidered as receiving from it any virtue.

SYRUPUS AMOMI ZINGIBERIS. SYRUP OF GINGER.

Syrup. Zinziber.

"Take of the Root of Ginger, beat, three ounces; Boiling Water, four pounds; Refined

Sugar, ſeven pounds and a half. Macerate the root in the water, in a cloſe veſſel for twenty-four hours; and, to the ſtrained liquor, add the beat ſugar, ſo as to make a ſyrup."

THE flavour of the ginger renders this ſyrup ſufficiently pleaſant; it is therefore not unfrequently uſed.

Syrup. Cortic. Aurant.

SYRUPUS CITRI AURANTII. SYRUP OF ORANGE-PEEL.

"Take of the Freſh Outer Rind of the Orange, ſix ounces; Boiling Water, three pounds; Refined Sugar, four pounds. Macerate the rind in water for twelve hours; then to the ſtrained liquor add the ſugar beat to powder, and, by the application of a gentle heat, form a ſyrup."

THIS ſyrup, like the former, is uſed merely on account of its grateful aromatic flavour.

Syrup. Limonis Succi.

SYRUPUS CITRI MEDICÆ, *olim Syrupus Limonum.* SYRUP OF LEMON.

"Take of the Juice of Lemons ſtrained after the impurities have ſubſided, three parts; Refined ſined Sugar, five parts; diſſolve the ſugar ſo as to form a ſyrup."

THIS pleaſant ſyrup is uſed to ſweeten and acidulate mixtures, eſpecially thoſe of the mucilaginous kind.

SYRUPUS COLCHICI AUTUMNALIS. SYRUP OF COLCHICUM.

"Take of the Freſh Root of Colchicum, cut into ſmall pieces, one ounce; Acetous Acid, ſixteen ounces; Refined Sugar, twenty-ſix ounces. Macerate the root in the acid for two days, ſhaking the veſſel occaſionally; then expreſſing it gently, ſtrain it; to the ſtrained liquor add the ſugar, and boil a little, ſo as to form a ſyrup."

COLCHICUM has been uſed under this form as a diuretic in dropſy. The doſe of the ſyrup is half an ounce or ſix drachms.

SYRUPUS DIANTHI CARYOPHILLI. SYRUP OF CLOVE JULY-FLOWER.

Syrup. Caryophill. Rub.

"Take of the Freſh Petals of the Clove July-Flower freed from the heels, one pound; of Boiling Water, four pounds; of Refined Sugar, ſeven pounds. Macerate the petals in the water for twelve hours; then to the ſtrained liquor add the beat ſugar; which diſſolve with a gentle heat, ſo as to form a ſyrup."

THIS ſyrup is valued principally on account of its deep red colour. Its flavour alſo is pleaſant.

Syrup. Papav. Alb.

SYRUPUS PAPAVERIS SOMNIFERI. SYRUP OF WHITE POPPY.

"Take of the Dried Capſules of the White Poppy, freed from the ſeeds, two pounds; Boiling Water, thirty pounds; Refined Sugar, four pounds. Macerate the ſliced capſules in the water for twelve hours; then boil until a third part only of the liquor remain; and preſſing it ſtrongly, ſtrain; boil down the ſtrained liquor to one-half, and again ſtrain; laſtly, the ſugar being added, boil a little, ſo as to form a ſyrup."

THE capſules of the poppy poſſeſs the narcotic power of the plant; and the matter in which this reſides is ſoluble in water. In this preparation, therefore, it is extracted. The ſyrup is given as an anodyne principally to children. The doſe to a child a year old is one drachm.

It is uncertain in its ſtrength. The Dublin College have ſubſtituted for it a ſyrup of opium.

SYRUPUS RHAMNI CATHARTICI. SYRUP OF BUCKTHORN.

Syrup. Spinæ Cervinæ.

"Take of the Clarified Juice of ripe Buckthorn Berries, two parts; Refined Sugar, one part. Boil, ſo as to form a ſyrup."

THIS ſyrup is uſed as a cathartic; the doſe to an adult is an ounce, or an ounce and a half.

SYRUPUS ROSÆ GALLICÆ. SYRUP OF RED ROSE.

"Take of the Dried Petals of the Red Roſe, ſeven ounces; Boiling Water, five pounds; Refined Sugar, ſix pounds. Macerate the petals in water for twelve hours; then boil them a little, and ſtrain; to the ſtrained liquor add the ſugar, and again boil, ſo as to form a ſyrup."

IN this preparation the ſlight aſtringency of the red roſe is ſuppoſed to be preſerved; and where a ſyrup having this quality is indicated, this is generally preferred.

Syrup. Roſæ.

SYRUPUS ROSÆ CENTIFOLIÆ. SYRUP OF DAMASK OR PALE ROSE.

"Take of the Freſh Petals of the Damaſk Roſe, one pound; Boiling Water, four pounds; Refined Sugar, three pounds. Macerate the petals in water for twelve hours; then to the ſtrained liquor add the ſugar, and boil, ſo as to form a ſyrup."

THIS ſyrup is a very mild purgative, and, as ſuch, is given to children in a doſe of two or three tea-ſpoonfuls.

SYRUPUS SCILLÆ MARITIMÆ. SYRUP OF SQUILL.

"Take of the Vinegar of Squill, two pounds; Refined Sugar, three pounds and a half. Diſſolve the ſugar with a gentle heat, ſo as to form a ſyrup."

THIS is an active remedy, and is the form under which ſquill is generally given as an expectorant. Its doſe is one or two drachms. It is alſo given to children as an emetic, eſpecially in pertuſſis.

Syrup. Tolutan.

SYRUPUS TOLUIFERÆ BALSAMI, *vulgo Syrupus Balſamicus.* SYRUP OF TOLU BALSAM.

" Take of Common Syrup, two pounds; Tincture of Tolu Balſam, one ounce. With the ſyrup newly prepared, and removed from the fire, when it has nearly cooled, mix the tincture gradually with agitation."

THIS ſyrup, according to the formula of the London College, is prepared by boiling the Balſam of Tolu in water, and diſſolving the ſugar in this liquor. Prepared in either way, it can be valued only on account of its flavour.

Syrup. Violæ.

SYRUPUS VIOLÆ ODORATÆ. SYRUP OF VIOLET.

" Take of the freſh flowers of the Sweet-ſcented Violet, one pound; Boiling Water, four pounds; Refined Sugar, ſeven pounds and a half. Macerate the flowers in water for twenty-four hours in a covered glaſs or earthen veſſel. Then ſtrain, without expreſſion, and to the ſtrained liquor, add the beat Sugar, ſo as to form a ſyrup."

THIS ſyrup is a very gentle laxative, and as ſuch is given to infants in a doſe of one or two tea-ſpoonfuls.

It remains to notice thoſe few ſyrups which have not a place in the Edinburgh Pharmacopœia.

SYRUPUS SUCCI FRUCTÛS MORI. SYRUP OF MULBERRY JUICE.

SYRUPUS SUCCI FRUCTÛS RUBI IDÆI. SYRUP OF RASPBERRY JUICE.

SYRUPUS SUCCI FRUCTÛS RIBIS NIGRI. SYRUP OF BLACK-CURRANT JUICE.

The ſyrups prepared from theſe fruits, inſerted in the London Pharmacopœia, are pleaſant and acidulous. Some of them, however, are ſuperfluous.

SYRUPUS CROCI. SYRUP OF SAFFRON. *Pharm. Lond.* is admitted on account of its colour, as is alſo the SYRUPUS PAPAVERIS ERRATICI. SYRUP OF RED POPPY.

Medicated honeys differ in little or nothing from ſyrups, and are therefore rejected from the Edinburgh Pharmacopœia. In the London and Dublin Pharmacopœias, are retained, Mel acetatum. Oxymel colchici. Mel rosæ. Mel scillæ. Oxymel scillæ; which, as the correſponding ſyrups, have been noticed, it would be ſuperfluous to give at length.

CHAP. X.

VINA.—WINES.

WINE, from its compoſition, and eſpecially from the alkohol and water it contains, is capable of diſſolving the active matter of many vegetables. Solutions of this kind are named *Medicated Wines.* They are more liable to decompoſition from keeping than tinctures. To obviate this, it is uſual to add to them, when prepared, a portion of alkohol.

* * *

Vinum Aloes. VINUM ALOES SOCOTORINÆ, *vulgo Tinctura Sacra.* WINE OF SOCCOTORINE ALOES. *Sacred Tincture.*

"Take of Socotorine Aloes, reduced to powder, one ounce; Leſſer Cardamom Seeds, Ginger Root, of each, beat, one drachm; Spaniſh White-wine, two pounds. Digeſt for ſeven days, ſhaking frequently, and ſtrain."

THE aloes is entirely ſoluble in the wine; ſo that in this preparation all its virtues are obtained. It is a ſtimulating cathartic, producing its full effect in the doſe of one ounce. In a doſe of one or two drachms, it is given to excite the action of the inteſtines and neighbouring organs.

VINUM GENTIANÆ COMPOSITUM, *vulgo Vinum Amarum.* COMPOUND GENTIAN WINE.

"Take of Gentian Root, half an ounce; Peruvian Bark, one ounce; Orange Peel dried, two drachms; Canella Bark, one drachm; Diluted Alkohol, four ounces; Spaniſh White-wine, two pounds and a half. On the root and barks bruiſed, pour firſt the diluted alkohol; and after twenty-four hours, add the wine. Then macerate for ſeven days, and ſtrain."

THIS wine is deſigned as a ſtomachic; but from its tendency to become aceſcent, it is not well adapted to adminiſtration in dyſpepſia. Its doſe is ſix drachms.

VINUM IPECACUANHÆ. IPECACUAN WINE.

Vinum Ipecac.

"Take of Ipecacuan Root bruiſed, one ounce; Spaniſh White-wine, fifteen ounces. Macerate

cerate for ſeven days, and ſtrain through paper."

THIS Medicated Wine is preferable to a Tincture of Ipecacuan, as being leſs pungent, while it holds the active matter of the root fully diſſolved. Its doſe as an emetic is one ounce to an adult.

VINUM NICOTIANÆ TABACI. TOBACCO WINE.

" Take of the leaves of Tobacco, one ounce; Spaniſh White-wine, one pound. Macerate for ſeven days, and ſtrain through paper."

UNDER this form, Tobacco has been uſed as a diuretic in dropſy. Doſe, thirty drops, gradually increaſed to ſixty or eighty twice a-day.

Vinum Rhabarbari.

VINUM RHEI PALMATI. RHUBARB WINE.

" Take of the Root of Rhubarb, cut, two ounces; Canella Bark, one drachm; Diluted Alkohol, two ounces; Spaniſh White-wine, fifteen ounces. Macerate ſeven days, and ſtrain through paper."

THE doſe of this wine as a purgative is from half an ounce to an ounce. The tincture of rhubarb is in general to be preferred to it.

CHAP. XI.

ACETA.—VINEGARS.

VINEGAR is capable of diſſolving ſeveral of the principles of vegetables. It frequently, however, alters their powers, or does not coincide with them in virtue. There are, therefore, few Medicated Vinegars in uſe.

* * *

ACETUM AROMATICUM. AROMATIC VINEGAR.

"Take of the dried tops of Roſemary; the dried leaves of Sage, of each four ounces; dried Lavender Flowers, two ounces; Cloves, two drachms; diſtilled Acetous Acid, eight pounds. Macerate for ſeven days, and ſtrain the expreſſed liquor through paper."

FROM the impregnation of the vinegar with the flavour of theſe aromatic vegetables, it becomes a grateful perfume, to which purpoſe chiefly this preparation is applied.

ACIDUM ACETOSUM CAMPHORATUM. CAMPHORATED ACETOUS ACID.

"Take of the ſtronger Acetous Acid, ſix ounces; Camphor, half an ounce; Alkohol, as much as may be neceſſary. Rub the Camphor with the alkohol into a powder, which put into the acid, that it may be diſſolved.

THIS preparation, ſnuffed up the noſtrils, is a powerful and grateful ſtimulant, uſed to obviate nauſea, or relieve languor.

Acet. Scillæ.

ACETUM SCILLÆ MARITIMÆ. VINEGAR OF SQUILL.

"Take of Squill Root dried, two ounces; diſtilled Acetous Acid, two pounds and a half; Alkohol, three ounces. Macerate the ſquill with the acetous acid for ſeven days: expreſs the acid; to which add the alkohol; and when the impurities have ſubſided, pour off the liquor."

VINEGAR is the proper menſtruum of ſquill; and this preparation poſſeſſes all its powers, unimpaired. It is ſeldom given under this form as a diuretic, but generally as an expectorant. The doſe is from one to two drachms.

CHAP. XII.

CHAP. XII.

TINCTURA.—TINCTURES.

TINCTURES are ſolutions of vegetable, animal, and ſometimes of mineral ſubſtances, in ſpiritous liquors. The ſolvent may be either pure alkohol, diluted alkohol, or alkohol impregnated with ammonia or ether. They generally contain the virtues of the ſubſtances diſſolved, in a concentrated ſtate, though ſometimes altered, or loſt in thoſe of the menſtruum. They are little liable to decompoſition, and this gives them a ſuperiority over thoſe preparations in which the ſolvent power of water is employed.

Alkohol is the ſolvent of a number of the immediate principles of vegetables; of reſin, camphor, eſſential oil, and extract; and hence is capable of extracting the virtues of many important remedies. Tinctures made with it are in general decompoſed on the addition of watery liquors.

Diluted Alkohol or Proof-ſpirit is a ſtill more general ſolvent; as the water it contains diſſolves ſeveral principles which are not ſoluble in pure alkohol. It is therefore more generally employed.

Alkohol, impregnated with ammonia or ether, is employed in forming tinctures only of a few ſubſtances, whoſe operations are ſuppoſed to be promoted by theſe agents.

* * *

Tinct. Aloes.

TINCTURA ALOES SOCOTORINÆ. TINCTURE OF ALOES.

"Take of Socotorine Aloes in powder, half an ounce; Extract of Liquorice, one ounce and a half; Alkohol, four ounces; Water, one pound. Digeſt for ſeven days with a gentle heat in a cloſed veſſel, ſhaking the veſſel frequently; (directions which, with regard to all tinctures, are to be obſerved)."

This is the only tincture in which the proportion of water is ſuperior to that of alkohol. The aloes being principally gum, is entirely diſſolved by the menſtruum. Its doſe as a cathartic is one ounce.

TINCTURA ALOES ÆTHEREA. ETHEREAL TINCTURE OF ALOES.

" Take of Myrrh, Socotorine Aloes, of each one ounce and a half; Engliſh Saffron, one ounce; Spirit of Sulphuric Ether, one pound. Digeſt the myrrh with the ſpirit for four days in a cloſed phial; then add the ſaffron and aloes. Digeſt again for four days; and when the impurities have ſubſided, pour off the tincture."

By firſt digeſting the myrrh with the ſpirit, a ſufficient quantity of it is diſſolved, which it would not be were the aloes added alongſt with it; and by the ſecond digeſtion, a ſufficient quantity of the latter is taken up. The formula is the improvement of one which has long kept its place in the different pharmacopœias. It is a ſtimulating purgative in a doſe of one or two drachms.

Tinct. Aloes Comp.

TINCTURA ALOES CUM MYRRHA. TINCTURE OF ALOES AND MYRRH.

"Take of Myrrh powdered, two ounces; Alkohol, one pound and a half; Water, half a pound. Mix the alkohol with the water; then add the myrrh; digeſt for four days; and laſtly, add of Socotorine Aloes, one ounce and a half; Engliſh Saffron, one ounce. Digeſt again for three days, and pour off the pure tincture."

THIS tincture differs in little from the former but in the menſtruum. It is uſed principally externally as an application to bleeding wounds, and a ſtimulant to foul ulcers.

Tinctura Cardamomi.

TINCTURA AMOMI REPENTIS. TINCTURE OF CARDAMOM.

"Take of Cardamom Seeds, four ounces; Diluted Alkohol, two pounds and a half. Digeſt for two days, and ſtrain through paper."

THIS tincture is uſed for its moderate aromatic flavour and pungency. A compound tincture of cardamom, in which caraway, cinnamon and raiſins, are introduced, is likewiſe inſerted in the

London Pharmacopœia, and is uſed for the ſame purpoſe.

TINCTURA ARISTOLOCHIÆ SERPENTARIÆ.

TINCTURE OF SNAKE-ROOT.

Tinctura Serpentar.

"Take of Virginian Snake-root, two ounces; Cochineal, one drachm; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

SERPENTARIA is ſeldom exhibited under the form of tincture. As a grateful bitter, it may be given occaſionally in dyſpepſia in a doſe of two drachms.

TINCTURA ASSAFOETIDÆ. TINCTURE OF ASSAFOETIDA.

Tinctura Aſſafœtid.

"Take of Aſſafœtida, four ounces; Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

THIS is a ſolution chiefly of the reſinous part of the aſſafœtida. As a remedy in hyſteria, it is ſometimes given in a doſe of one drachm.

Tinctura Benzoes Comp.

TINCTURA BENZOES COMPOSITA, *vulgo Balſamum Traumaticum.* COMPOUND TINCTURE OF BENZOIN.

"Take of Benzoin, three ounces; Balſam of Peru, two ounces; Hepatic Aloes, half an ounce; Alkohol, two pounds. Digeſt for ſeven days, and ſtrain through paper."

THIS is uſed only externally, and principally as an application to recent ſuperficial wounds.

Spiritus Camphorat.

TINCTURA CAMPHORÆ; *vulgo Spiritus Vinoſus Camphoratus.* TINCTURE OF CAMPHOR.

"Take of Camphor, one ounce; Alkohol, one pound. Mix, ſo as to diſſolve the camphor. It may be alſo made with a double or triple proportion of camphor."

THIS ſolution is uſed externally as a ſtimulant and anodyne application in chronic rheumatiſm, bruiſes and ſtrains. It is applied by friction to the part.

LINIMENTUM CAMPHORÆ COMPOSITUM. *Lond.*

"Take of Camphor two ounces; Water of Ammonia, ſix ounces; Spirit of Lavender, ſixteen ounces. Mix the water of ammonia with the ſpirit, and diſtil ſixteen ounces from a glaſs retort with a gentle heat. Diſſolve the camphor in the diſtilled liquor."

THIS liniment is applied to the ſame uſes as the preceding. From the addition of the ammonia it is more powerful as a ſtimulant.

TINCTURA CASSIÆ SENNÆ COMPOSITA, *olim Elixir Salutis.* TINCTURE OF SENNA.

Tinct. Sennæ.

"Take of the Leaves of Senna, two ounces; Root of Jalap, one ounce; Coriander Seeds, half an ounce; Diluted Alkohol, three pounds and a half. Digeſt for ſeven days, and to the tincture ſtrained through paper add four ounces of Refined Sugar."

THIS tincture is in very common uſe as a purgative. Its doſe is one ounce, or one ounce and a half.

Tinct. Caſtor.

TINCTURA CASTOREI. TINCTURE OF CASTOR.

"Take of Ruſſian Caſtor, one ounce and a half; Alkohol, one pound. Digeſt for ſeven days, and ſtrain through paper."

IN the London, and likewiſe in the Dublin Pharmacopœia, this tincture is ordered to be prepared with diluted alkohol; but with pure alkohol it is more grateful. It is a feeble remedy, given ſometimes as an antiſpaſmodic, in a doſe of from half a drachm to a drachm.

TINCTURA CASTOREI COMPOSITA. COMPOUND TINCTURE OF CASTOR.

"Take of Ruſſian Caſtor, one ounce; Aſſafœtida, half an ounce; Ammoniated Alkohol, one pound. Digeſt for ſeven days, and ſtrain through paper."

THIS tincture is more active than the former; it is given in a ſimilar doſe.

Tinct. Cinchonæ.

TINCTURA CINCHONÆ OFFICINALIS. TINCTURE OF PERUVIAN BARK.

"Take of Peruvian Bark in powder, four ounces; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

THE active matter of bark is entirely extracted by diluted alkohol, but the powers of the menſtruum itſelf do not allow of the uſe of bark under this form, where large doſes of the remedy are neceſſary. It is uſed in dyſpepſia, occaſionally, in a doſe of two drachms.

TINCTURA CINCHONÆ, *vulgo Corticis Peruviani*, COMPOSITA. COMPOUND TINCTURE OF PERUVIAN BARK. *Lond.*

"Take of Peruvian Bark in powder, two ounces; dried Orange-peel, one ounce and a half; Virginian Snake-root, three drachms; Saffron, one drachm; Cochineal in powder, two ſcruples; Proof-Spirit, twenty ounces. Digeſt for fourteen days, and ſtrain."

THIS has been long known under the name of *Huxham's Tincture of Bark.* It is more grateful than the ſimple tincture, and is uſed like it in dyſpeptic affections, in a doſe of two or three drachms.

TINCTURA CINCHONÆ, *vulgo Corticis Peruviani*, AMMONIATA. *Lond.* AMMONIATED TINCTURE OF BARK.

" Take of Peruvian Bark in powder, four ounces; Compound Spirit of Ammonia, two pounds. Digeſt in a cloſed veſſel for ten days, and ſtrain."

THERE ſeems little propriety in employing ſpirit of ammonia as a menſtruum of bark, as in ſcarcely any caſe can they coincide in virtue, and the activity of the ammonia muſt be much ſuperior to that of the quantity of bark diſſolved.

Tinct. Colomb. TINCTURA COLOMBÆ. TINCTURE OF COLOMBO.

" Take of the Root of Colombo in powder, two ounces; diluted Alkohol, two pounds. Digeſt for ſeven days, and ſtrain through paper."

THIS is uſed merely as a bitter tincture in dyſpepſia, in a doſe of three or four drachms.

TINCTURA CONVOLVULI JALAPÆ. TINCTURE OF JALAP.

Tinct. Jalap.

"Take of the root of Jalap in powder, three ounces; diluted Alkohol, fifteen ounces. Digeſt for ſeven days, and ſtrain through paper."

THE activity of jalap reſides in its reſin, which in this preparation is extracted along with a portion of mucilage. The tincture may be given as a cathartic, in a doſe of four or ſix drachms.

TINCTURA CROCI. TINCTURE OF SAFFRON.

"Take of Engliſh Saffron, one ounce; diluted Alkohol, fifteen ounces. Digeſt for ſeven days, and ſtrain through paper."

THIS tincture is to be valued only for its colour.

TINCTURA DIGITALIS PURPUREÆ. TINCTURE OF FOXGLOVE.

"Take of the dried Leaves of Foxglove, one ounce; Diluted Alkohol, eight ounces. Digeſt for ſeven days, and ſtrain through paper."

THIS is a very active preparation; it is the one in which the virtues of digitalis are longeſt preſerved uninjured, and appears to be the beſt form under which that remedy can be exhibited, to obtain its *narcotic* effects. Its doſe is ten drops, which, according to the general rules obſerved in the adminiſtration of digitalis, is to be gradually increaſed.

Tinct. Gentian. Comp.

TINCTURA GENTIANÆ COMPOSITA, *vulgo Elixir Stomachicum.* COMPOUND TINCTURE OF GENTIAN.

"Take of Gentian Root, two ounces; dried Orange-peel, one ounce; Canella Bark, half an ounce; Cochineal, half a drachm; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

THIS tincture is employed in dyſpepſia, in a doſe of two or three drachms given occaſionally.

TINCTURA GUAJACI. TINCTURE OF GUAIAC.

"Take of the Reſin of Guaiac, one pound; Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

THIS tincture may be given in a doſe of two or three drachms, but it is inferior in activity to the one which follows.

TINCTURA GUAJACI AMMONIATA. AMMONIATED TINCTURE OF GUAIAC.

Tinct. Guaiac. Ammon.

"Take of the Reſin of Guaiac, four ounces; Ammoniated Alkohol, one pound and a half. Digeſt for ſeven days, and ſtrain through paper."

THE ammonia coinciding in virtue with the guaiac, this affords a preparation of conſiderable efficacy. It is given in chronic rheumatiſm, in a doſe from one to two drachms.

TINCTURA HELLEBORI NIGRI. TINCTURE OF BLACK HELLEBORE.

Tinct. Helleb. Nig.

"Take of Black Hellebore Root, four ounces; Cochineal, half a drachm; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

THIS tincture has been uſed as an emmenagogue, in a doſe of one drachm.

TINCTURA

TINCTURA HYOSCIAMI NIGRI. TINCTURE OF BLACK HENBANE.

"Take of the dried Leaves of Black Henbane, one ounce; Diluted Alkohol, eight ounces. Digeſt for ſeven days, and ſtrain through paper."

THE tincture is a preferable form to the inſpiſſated juice, the form under which black henbane uſed to be employed.

TINCTURA KINO. TINCTURE OF KINO.

"Take of Kino, two ounces; Diluted Alkohol, one pound and a half."

THE doſe of this tincture, is from half a drachm to a drachm.

Tinct. Cinnam.

TINCTURA LAURI CINNAMOMI. TINCTURE OF CINNAMON.

"Take of Cinnamon Bark, three ounces; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

THIS is uſed merely as an aromatic.

TINCTURA

Tinct. Cinnam. Comp.

TINCTURA LAURI CINNAMOMI COMPOSITA, *olim Tinctura Aromatica.* COMPOUND TINCTURE OF CINNAMON.

"Take of the Bark of Cinnamon, Cardamom-ſeeds, of each one ounce; Long Pepper, two drachms; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

THIS tincture is uſed principally in combination with other medicines, to communicate to them an aromatic pungency and odour.

Tinct. Canthar.

TINCTURA MELOES VESICATORII, *vulgo Tinctura Cantharidum.* TINCTURE OF CANTHARIDES.

"Take of Cantharides, one drachm; Diluted Alkohol, one pound. Digeſt for ſeven days, and ſtrain through paper."

THIS tincture is uſed principally externally as a rubefacient; as an internal remedy, the doſe in which it has been given is fifteen drops.

Tinct. Catechu.

TINCTURA MIMOSÆ CATECHU; *olim, Tinctura Japonica.* TINCTURE OF CATECHU.

"Take of Catechu, three ounces; Bark of Cinnamon, two ounces; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

THIS ſolution of catechu, rendered more grateful by the cinnamon, is given in a doſe of one drachm.

Tinct. Myrrh.

TINCTURA MYRRHÆ. TINCTURE OF MYRRH.

"Take of Myrrh in powder, three ounces; Alkohol, twenty ounces; Water, ten ounces. Digeſt for ten days, and ſtrain through paper."

MYRRH being principally reſinous, requires for its ſolution alkohol, not ſo much diluted as proof-ſpirit. The tincture is uſed principally as an external ſtimulant and antiſeptic application.

Tinct. Opii.

TINCTURA OPII, *ſive Thebaica; vulgo, Laudanum liquidum.* TINCTURE OF OPIUM.

"Take of Opium, two ounces; Diluted Alkohol, two pounds. Digeſt for ſeven days, and ſtrain through paper."

THIS tincture is the uſual form under which opium is adminiſtered. The proportion of opium to the ſolvent, is five grains to the drachm; but by evaporation it is found that one drachm of the tincture holds three grains and a half diſſolved. The uſual doſe is twenty-five drops.

TINCTURA OPII AMMONIATA; *olim, Elixir Paregoricum.* AMMONIATED TINCTURE OF OPIUM.

"Take of Benzoic Acid, Engliſh Saffron, of each three drachms; Opium, two drachms; Volatile Oil of Aniſe, half a drachm; Ammoniated Alkohol, ſixteen ounces. Digeſt for ſeven days in a ſhut phial, and ſtrain through paper."

THE operation of the opium cannot be much influenced by the ſubſtances with which it is combined in this formula. The common application of it is as a remedy in catarrhal affections. Its doſe is from half a drachm to a drachm. The proportion of opium is one grain to a drachm.

TINCTURA OPII CAMPHORATA. *Lond.*

"Take of Hard Purified Opium reduced to powder, Flowers of Benzoin, of each one drachm; Camphor, two ſcruples; Oil of Aniſe, one drachm; Proof-Spirit, two pounds by meaſure. Digeſt for ten days, and ſtrain."

This tincture, known like the preceding one by the name of Paregoric Elixir, differs from it not only in ſome of the ingredients and in the menſtruum, but in the proportion of opium. Half an ounce of it contains only one grain. Its doſe is two or three drachms.

TINCTURA RHEI PALMATI. TINCTURE OF RHUBARB.

Tinct. Rhabarb.

"Take of the Root of Rhubarb, three ounces; Leſſer Cardamom Seeds, half an ounce; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

This tincture contains all the virtues of rhubarb. Its doſe is from half an ounce to an ounce.

TINCTURA RHEI CUM ALOE; *olim, Elixir Sacrum,* TINCTURE OF RHUBARB WITH ALOES.

"Take of the Root of Rhubarb, ten drachms; Socotorine Aloes, ſix drachms; Leſſer Cardamom Seeds, half an ounce; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

This is frequently employed as a ſtimulating cathartic, in a doſe of ſix drachms, or an ounce.

TINCTURA RHEI CUM GENTIANA; *olim, Tinctura Rhei Amara.* TINCTURE OF RHUBARB WITH GENTIAN.

"Take of Root of Rhubarb, two ounces; Gentian Root, half an ounce; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

This combination of gentian with rhubarb is ſuppoſed to render it a more uſeful remedy in dyſpeptic caſes. Its doſe is from two to four drachms.

TINCTURA RHEI COMPOSITA. *Lond.* COMPOUND TINCTURE OF RHUBARB.

"Take of Rhubarb cut, two ounces; Liquorice bruiſed, half an ounce; Ginger in powder, Saffron, of each two drachms; Diſtilled Water, one pound; Proof-Spirit, twelve ounces. Digeſt for fourteen days, and ſtrain."

This tincture differs in little from the ſimple tincture, except in the uſe of a menſtruum, containing leſs alkohol. It may be given in a ſimilar doſe.

Liniment. Sapon. Comp. TINCTURA SAPONIS, *vulgo Linimentum Saponaceum.* TINCTURE OF SOAP.

"Take of Soap, four ounces; Camphor, two ounces; Volatile Oil of Roſemary, half an ounce; Alkohol, two pounds. Digeſt the ſoap in the alkohol for three days; then add the camphor and oil to the ſtrained liquor, agitating it."

THIS is a powerful ſtimulant uſed as an external application in ſtrains and rheumatic pains.

TINCTURA SAPONIS CUM OPIO; *olim, Linimentum Anodynum.* TINCTURE OF SOAP WITH OPIUM.

"This is made in the ſame manner, and from the ſame ingredients, as the tincture of ſoap; only adding at firſt one ounce of opium."

IT is uſed for the ſame purpoſes as the preceding tincture, but is a more powerful anodyne.

Tinct. Balſam. Tolut. TINCTURA TOLUIFERÆ BALSAMI; *olim, Tinctura Tolutana.* TINCTURE OF TOLU BALSAM.

"Take of Balſam of Tolu, one ounce and a half; Alkohol, one pound. Digeſt until the balſam is diſſolved, and ſtrain through paper."

THIS tincture is ſcarcely uſed but on account of its flavour, and for making the Syrup of Tolu.

TINCTURA VERATRI ALBI. TINCTURE OF WHITE HELLEBORE.

" Take of White Hellebore Root, eight ounces; Diluted Alkohol, two pounds and a half. Digeſt for ſeven days, and ſtrain through paper."

WHITE HELLEBORE is a medicine perhaps never preſcribed internally, its operation is ſo violent. The doſe of this tincture cannot exceed a few drops.

* * *

THE following are the Tinctures peculiar to the London Pharmacopœia. In each of them the pound is by meaſure, or is equivalent to a pint.

TINCTURA AURANTII CORTICIS. TINCTURE OF ORANGE-PEEL.

" Take of Freſh Orange-peel, three ounces; Proof-Spirit, two pounds. Digeſt for three days, and ſtrain."

It may be uſed as ſtomachic and as a grateful bitter.

TINCTURA BALSAMÆ PERUVIANI. TINCTURE OF PERUVIAN BALSAM.

"Take of Peruvian Balſam, four ounces; Rectified Spirit of Wine, one pound. Digeſt until the balſam is diſſolved."

This tincture is ſcarcely applied to any uſe.

TINCTURA CASCARILLÆ. TINCTURE OF CASCARILLA.

"Take of Caſcarilla in powder, four ounces; Proof-Spirit, two pounds. Digeſt with a gentle heat for eight days, and ſtrain."

Cascarilla being a remedy little employed in modern practice, this tincture is ſcarcely uſed.

TINCTURA GALBANI. TINCTURE OF GALBANUM.

"Take of Galbanum cut into ſmall pieces, two ounces; Proof Spirit, two pounds. Digeſt with a gentle heat for eight days, and ſtrain."

Tincture of Galbanum has been uſed in hyſteria, flatulence and aſthma, in a doſe from one to three drachms.

TINCTURA SABINÆ COMPOSITA. COMPOUND TINCTURE OF SAVIN.

" Take of Extract of Savin, one ounce; Tincture of Caſtor, one pound; Tincture of Myrrh, half a pound. Digeſt until the extract of ſavin is diſſolved, and ſtrain."

This tincture has been recommended as an emmenagogue, in a doſe of half a drachm twice a-day.

TINCTURA SCILLÆ. TINCTURE OF SQUILL.

" Take of Squill recently dried, four ounces; Proof-Spirit, two pounds. Digeſt for eight days, and pour off the liquor."

As vinegar beſt covers the nauſeous taſte of ſquill, it is generally uſed as its menſtruum. This tincture contains, however, the active matter of this root, and may be given in a doſe of from twenty to ſixty drops.

TINCTURA VALERIANÆ. TINCTURE OF VALERIAN.

"Take of Wild Valerian in coarſe powder, four ounces; Proof-Spirit, two pounds. Digeſt with a gentle heat for eight days, and ſtrain."

TINCTURA VALERIANÆ AMMONIATA. AMMONIATED TINCTURE OF VALERIAN.

"Take of Wild Valerian in coarſe powder, four ounces; Compound Spirit of Ammonia, two pounds. Digeſt for eight days, and ſtrain."

OF theſe two tinctures, the latter is the more powerful, and is a remedy not unfrequently employed in hyſteric affections. Its doſe is from one to two drachms.

TINCTURA ZINGIBERIS. TINCTURE OF GINGER.

"Take of Ginger in powder, two ounces; Proof-Spirit, two pounds. Digeſt with a gentle heat for eight days, and ſtrain."

THIS tincture contains the pungency of the ginger, and may be uſed as an aromatic in combination with other remedies.

CHAP. XIII.

EXTRACTA.—EXTRACTS.

WHEN vegetable matter is diſſolved in water or alkohol, by evaporation of the ſolvent, a concrete tenacious maſs is obtained, termed an Extract. When prepared from an aqueous ſolution, it is named a Watery, when from one in alkohol pure or diluted, a Spiritous extract. The former muſt conſiſt chiefly of thoſe proximate principles which water can eaſily diſſolve; mucilage, tannin, extractive and ſaline matter: the latter of a portion of theſe with reſin. In either preparation, the volatile principles muſt neceſſarily be diſſipated; and in many caſes, eſpecially in the preparation of the watery extracts, decompoſition or oxygenation of the more fixed parts take place. Hence there are few vegetables whoſe virtues are obtained uninjured in their extracts.

I.—*EXTRACTA*

I.—*EXTRACTA PER AQUAM.* EXTRACTS BY WATER.

THE directions for preparing theſe are given in the Edinburgh Pharmacopœia, under the Extract of Gentian.

Extract. Gentian.

EXTRACTUM GENTIANÆ LUTEÆ. EXTRACT OF GENTIAN.

" Take of Gentian Root, any quantity. Having cut and bruiſed it, add eight times its weight of Diſtilled Water. Boil to one half, and ſtrain, expreſſing the liquor ſtrongly. Reduce it immediately to the conſiſtence of thick honey, by evaporation in a bath of boiling water, ſaturated with muriat of ſoda."

THIS extract is intenſely bitter. It is generally uſed to form other medicines into pills.

IN the ſame manner are prepared the following Extracts :

EXTRACTUM RADICIS GLYCYRRHIZÆ GLABRÆ. EXTRACT OF LIQUORICE ROOT.

Extract. Glycyrr.

It conſiſts chiefly of mucilage and ſaccharine matter, and is uſed as a demulcent in catarrh. It is ſeldom prepared in the ſhops, but on a large ſcale; and in ſome of the foreign Pharmacopœias, the extract of liquorice of commerce is ordered to be purified by ſolution in water, ſtraining, and a new evaporation. This is named Refined Liquorice.

EXTRACTUM RADICIS HELLEBORI NIGRI. EXTRACT OF BLACK HELLEBORE ROOT.

Extract. Helleb. Nig.

The ſpiritous extract of this root is extremely violent in its operation. The aqueous which is received in the Edinburgh Pharmacopœia is comparatively mild. Its doſe is from ten to twenty grains.

EXTRACTUM FOLIORUM RUTÆ GRAVEOLENTIS. EXTRACT OF RUE.

Extract. Rutæ.

As the virtues of Rue reſide chiefly, if not entirely, in its eſſential oil, this extract received in both Pharmacopœias muſt be regarded as an injudicious preparation.

Extract. Sennæ.

EXTRACTUM FOLIORUM CASSIÆ SENNÆ. EXTRACT OF SENNA.

SENNA has its activity much impaired by decoction. The extract, therefore, cannot be regarded as a proper preparation of it.

Extract. Chamæmeli.

EXTRACTUM FLORUM ANTHEMIDIS NOBILIS. EXTRACT OF CHAMOMILE.

THE unpleaſant flavour of chamomile is entirely diſſipated by decoction. The extract is, therefore, a pure and grateful bitter.

Extract. Papaveris Albi.

EXTRACTUM CAPITUM PAPAVERIS SOMNIFERI. EXTRACT OF POPPY.

THIS extract from the capſule of the poppy retains its narcotic quality, but is not uniform in ſtrength. Sometimes it is uſed in making the Syrup of Poppy.

Extract. Hæmatoxyli.

EXTRACTUM LIGNI HÆMATOXYLI CAMPECHENSIS. EXTRACT OF LOGWOOD.

THE aſtringency of the logwood is obtained entire in this extract. It is ſometimes uſed as the baſis of aſtringent mixtures. Its doſe is from ten to twenty grains.

THE watery extracts in the London Pharmacopœia are the ſame with thoſe in the Edinburgh, with the addition of Extract of Broom, of Savin, of Peruvian Bark.

EXTRACTUM CACUMINIS GENISTÆ. EXTRACT OF BROOM TOPS.

AN infuſion of broom tops has been uſed as a diuretic; but the extract can ſcarcely be conſidered as poſſeſſing any power.

EXTRACTUM SABINÆ. EXTRACT OF SAVIN.

THIS is liable to the ſame objection as the extract of rue,—that its virtues reſide chiefly in its eſſential oil, which muſt be diſſipated during the proceſs.

EXTRACTUM CINCHONÆ, *vulgo Corticis Peruviani.* EXTRACT OF PERUVIAN BARK.

" Take of Peruvian Bark, in coarſe powder, one pound; Diſtilled Water, twelve pounds. Boil for an hour or two, and pour off the liquor, which, while hot, will be red and pellucid; but as it cools, becomes yellow and turpid. Pour on again the ſame quantity of water; boil as formerly; and repeat the boiling, until the liquor, when cold, remains limpid. Then reduce all theſe liquors, mixed together and ſtrained, to a proper conſiſtence, by evaporation.

"This extract ought to be prepared under two forms; one *ſoft*, fit to form pills; the other *hard*, ſo that it may be reduced to powder."

The active matter of bark is in a great meaſure of a reſinous nature, but this the water, when aſſiſted by a boiling heat, is capable of diſſolving. During the boiling and evaporation, however, it ſuffers a chemical change to a certain extent; and the extract obtained is far from being equal in efficacy to the quantity of bark from which it is prepared. Its medium doſe is ten grains, and is ſuppoſed to be equivalent to half a drachm of the bark in ſubſtance. In the above proceſs the boiling is continued too long, and the direction to ſtrain the liquors is improper.

* * *

II.—*Extracta per Aquam et Alkohol.* Extracts by Water and Alkohol.

Extractum cinchonæ officinalis. Extract of Peruvian Bark.

Extract.
Cinchon
vulgo
Cortic.
Peruv.
cum Reſ
na.

“ Take of Peruvian Bark in powder one pound; Alkohol, four pounds. Digeſt for four days, and pour off the tincture. Boil the reſiduum in five pounds of diſtilled water for a quarter of an hour, and ſtrain the decoction while hot through linen. Repeat this boiling, and ſtraining with an equal quantity of diſtilled water, and reduce the liquor by evaporation to the conſiſtence of thin honey. Draw off the alkohol from the tincture by diſtillation, until it is reduced to a ſimilar conſiſtence. Then mix the liquors thus inſpiſſated, and reduce to a proper conſiſtence by a bath of boiling water, ſaturated with muriat of ſoda.”

THIS preparation is undoubtedly preferable to the watery extract of bark. By the joint action of the alkohol and water, every principle adhering to the mere ligneous fibre of the bark is diſſolved. And in the ſubſequent evaporation, the diſſolved matter ſuffers leſs injury, partly from leſs heat being required to bring it to the due conſiſtence, and partly perhaps from the alkohol reſiſting the oxygenation of the extract. It is, however, much more expenſive; and the extract of bark to be found in the ſhops is generally that prepared by the preceding formula. The doſe of this extract is ten grains.

Extract. Jalapii.

EXTRACTUM RADICIS CONVOLVULI JALAPÆ.

EXTRACT OF JALAP.

THIS is ordered to be prepared in the ſame manner as the Extract of Bark. It is a cathartic capable of operating fully in a doſe of ten or twelve grains.

BESIDES theſe two, there are ſome other Spiritous Extracts in the London Pharmacopœia.

EXTRACTUM CASCARILLÆ. EXTRACT OF CASCARILLA.

It may be regarded as bitter and tonic. Its doſe is one ſcruple or half a drachm.

EXTRACTUM COLOCYNTHIDIS COMPOSITUM. COMPOUND EXTRACT OF COLOCYNTH.

"Take of the Pith of Colocynth cut ſmall, ſix drachms; Socotorine Aloes in powder, one ounce and a half; Scammony in powder, half an ounce; Leſſer Cardamom Seeds freed from the huſks, powdered, one drachm; Proof-Spirit, one pound. Digeſt the colocynth in the ſpirit with a gentle heat for four days. To the expreſſed tincture add the aloes and ſcammony. Theſe being diſſolved, draw off the ſpirit by diſtillation; then evaporate the water, adding the ſeeds towards the end of the evaporation. Make an extract fit for forming pills."

This compoſition, formerly known by the name of Cathartic Extract, is a cathartic of much power, ſometimes employed in obſtinate conſtipation. Its doſe is from five to twenty grains.

OPIUM PURIFICATUM. PURIFIED OPIUM.

"Take of Opium cut into ſmall pieces, one pound; Proof-Spirit, twelve pounds. Digeſt with a gentle heat, agitating frequently until the opium is diſſolved; ſtrain the tincture through paper, and diſtil it thus prepared to a proper conſiſtence. Purified opium ought to be kept under two forms; ſoft, ſo as to be fit to form pills; and hard, ſo as to be capable of being reduced to powder."

A PROCESS ſimilar to this had a place in the Edinburgh Pharmacopœia, but has properly been expunged. It has been clearly proved, that during this proceſs the opium ſuffers decompoſition, probably from the action of the oxygen of the air, and that the ſolid purified maſs is not equal in narcotic power to the opium from which it has been prepared. It is a proceſs, too, entirely unneceſſary, as the impurities of the opium are not conſiderable; they neither alter its virtues, nor add much to its bulk.

CHAP. XIV.

AQUÆ STILLATITIÆ.—DISTILLED WATERS.

BY diſtillation of water from vegetable ſubſtances, it is frequently impregnated with their flavour and taſte. This is owing to their eſſential oil being volatilized at the temperature at which water boils, and being diſſolved in ſmall proportion by the water condenſed. It is very ſeldom that any important virtue of vegetables reſides in that principle, and hence the different diſtilled waters are more uſed as vehicles of other remedies, than as being themſelves active medicines. It is evident that it is only thoſe vegetables which contain a ſenſible quantity of eſſential oil, that can be ſubjected with advantage to this proceſs, and that any quality reſiding in the other principles of the vegetable will not be obtained in the diſtilled water. To preſerve the diſtilled waters from decompoſition, to which they are liable, from the ſmall quantity of vegetable matter they contain, a proportion of alkohol, about one fiftieth of their weight, may be added to them; and they require to be kept ſecluded from the air.

* * *

AQUA DESTILLATA. DISTILLED WATER.

Aq. Diſtillata.

"Diſtil Water in clean veſſels until about two-thirds have come over."

IN nature no water is found perfectly pure. Spring or river water always contains a portion of ſaline matter, principally ſulphat of lime; and, from this impregnation, is unfit for a number of pharmaceutic preparations. By diſtillation a perfectly pure water is obtained.

AQUA CORTICIS CITRI AURANTII. WATER OF ORANGE-PEEL.

"Take of Freſh Orange Peel two pounds. Pour on theſe as much water, that when ten pounds ſhall have been drawn off by diſtillation, a quantity ſhall remain ſufficient to prevent empyreuma. After due maceration diſtil ten pounds."

THIS diſtilled water has merely the odour of the orange-peel.

IN the ſame manner are prepared the following; which require no particular obſervations, ſince they poſſeſs merely the odour, and ſome of them the taſte and pungency of the vegetables from which they are prepared. Ten pounds of water are to be drawn by diſtillation from the quantities annexed to each:

AQUA CORTICIS FRUCTÛS CITRI MEDICÆ RECENTIS. (Freſh lemon peel, two pounds.)

AQUA CORTICIS LAURI CASSIÆ. (Bark of Caſſia, one pound.)

AQUA CORTICIS LAURI CINNAMOMI. (Bark of Cinnamon, one pound.) Aq. Cinnamomi.

AQUA MENTHÆ PIPERITÆ FLORENTIS. (Freſh peppermint, three pounds.) Aq. Menth. Pip.

AQUA MENTHÆ PULEGII FLORENTIS. (Freſh pennyroyal, three pounds.) Aq. Pulegii.

Aq. Pimento. AQUA FRUCTÛS MYRTI PIMENTÆ. (Pimento, half a pound.)

Aq. Roſæ. AQUA PETALORUM ROSÆ CENTIFOLIÆ RECENTIUM. (Freſh petals of the roſe, ſix pounds.)

IN the London Pharmacopœia are likewiſe inſerted,

AQUA ANETHI, DILL-SEED WATER.

AQUA FOENICULI, FENNEL-SEED WATER.

AQUA MENTHÆ SATIVÆ, SPEARMINT-WATER.

CHAP. XV.

SPIRITUS STILLATITII.—DISTILLED SPIRITS.

THESE are prepared by diſtilling pure alkohol or diluted alkohol from vegetable ſubſtances. Alkohol in its pure ſtate, ſeldom receives any ſenſible impregnation; becauſe, although it is capable of diſſolving the eſſential oils of plants, there are very few of them which it can bring over in diſtillation; a higher temperature being neceſſary to volatilize them than the alkohol. But, by employing diluted alkohol, a liquor is obtained more odorous and pungent. When heated with the vegetable, the alkohol firſt diſtils over, and afterwards the water with the eſſential oil, and the whole, when condenſed, forms a tranſparent fluid. Theſe diſtilled ſpirits, like the diſtilled waters, are in general merely agreeable vehicles for the exhibition of other medicines, or grateful ſtimulants, ſometimes uſed to relieve nauſea or flatulence. The directions for preparing them are given, in the Pharmacopœia, under the Spirit of Caraway.

* * *

Spirit. Carui.

SPIRITUS CARI CARVI. SPIRIT OF CARAWAY.

"Take of Caraway Seeds, half a pound. Pour on of Diluted Alkohol, nine pounds. Macerate during two days in a cloſe veſſel; then add a ſufficient quantity of water to prevent empyreuma, and draw off nine pounds by diſtillation."

IN the ſame manner are prepared the following ſpirits, Nine Pounds being drawn from the quantities affixed to each:

Spirit. Cinnamom.

SPIRITUS CORTICIS LAURI CINNAMOMI. (Bark of Cinnamon, one pound).

Spirit. Menth. P.

SPIRITUS MENTHÆ PIPERITÆ FLORENTIS. (Herb of peppermint, one pound and a half).

Spirit. Myriſt.

SPIRITUS NUCIS MYRISTICÆ MOSCHATÆ. (Nutmeg, two ounces).

Spirit. Pimento.

SPIRITUS FRUCTÛS MYRTI PIMENTÆ. (Fruit of pimento, half a pound).

To theſe may be added from the London Pharmacopœia,

SPIRITUS MENTHÆ SATIVÆ. SPIRIT OF SPEARMINT.

SPIRITUS PULEGII. SPIRIT OF PENNYROYAL.

OF Compound Spirits, the following have a place in the Pharmacopœias :

SPIRITUS JUNIPERI COMMUNIS COMPOSITUS. COMPOUND SPIRIT OF JUNIPER. *Pharm. Ed.*

Spirit. Junip. Comp.

" Take of Juniper Berries bruiſed, one pound ; Caraway Seeds, Fennel Seeds, of each one ounce and a half ; Diluted Alkohol nine pounds. Macerate for two days ; and, adding as much Water as is ſufficient to prevent empyreuma, draw off nine pounds by diſtillation."

THIS has been uſed as a carminative and diuretic.

SPIRITUS ANISI COMPOSITUS. COMPOUND SPIRIT OF ANISE. *Pharm. Lond.*

" Take of Aniſe Seeds, Angelica Seeds, of each bruiſed half a pound ; Proof-Spirit, one gallon ;

lon; Water as much as is ſufficient to prevent empyreuma. Diſtil one gallon."

USED alſo as a carminative.

SPIRITUS RAPHANI COMPOSITUS. SPIRIT OF HORSE-RADISH. *Pharm. Lond.*

"Take of freſh Horſe-radiſh root, dried Orange Peel, of each two pounds; freſh Garden Scurvygraſs, four pounds; Nutmegs bruiſed, one ounce; Proof-Spirit, two gallons; Water, as much as is ſufficient to prevent empyreuma. Diſtil two gallons."

THIS was at one time recommended as an antiſcorbutic. It has juſtly fallen into diſuſe.

THERE remain, laſtly, thoſe Diſtilled Spirits prepared with Pure Alkohol.

Spirit. Lavend.

SPIRITUS LAVANDULÆ SPICÆ. SPIRIT OF LAVENDER.

"Take of freſh Lavender Flowers, two pounds; Alkohol, eight pounds. Draw off ſeven pounds by diſtillation in a water-bath."

THIS is ſcarcely applied to any purpoſe but that of a perfume.

SPIRITUS LAVANDULÆ SPICÆ COMPOSITUS. COMPOUND SPIRIT OF LAVENDER.

Spirit. Lavendulæ Compoſit.

"Take of Spirit of Lavender, three pounds; Spirit of Roſemary, one pound; Cinnamon Bark, one ounce; Cloves, two drachms; Nutmeg, half an ounce; Red Saunders Wood, three drachms. Macerate ſeven days and ſtrain."

THIS tincture is a grateful cordial in common uſe, as relieving languor and faintneſs. Its doſe is thirty or forty drops.

SPIRITUS RORISMARINI OFFICINALIS. SPIRIT OF ROSEMARY.

Spirit. Roſmar.

"Take of Freſh Roſemary Tops, two pounds; Alkohol, eight pounds. Draw off ſeven pounds by diſtillation in a water-bath."

THIS ſpirit is a very fragrant perfume.

* * *

ALKOHOL.

There is no proceſs in the Edinburgh Pharmacopœia for the preparation of alkohol. The following is given by the London College:

"Take of Rectified Spirit of Wine, one gallon; Prepared Kali (Sub-carbonat of Potaſh) hot, one pound and a half; Pure Kali (Potaſh), one ounce. Mix the vinous ſpirit with the pure kali, and then add one pound of the prepared kali, while hot. Agitate and digeſt for twenty-four hours. Pour off the ſpirit; add to it the remainder of the prepared kali, and diſtil from a water-bath. Preſerve the alkohol in a veſſel well ſtopt. The prepared kali ought to be heated to 300°.

"The ſpecific gravity of alkohol is to that of diſtilled water as 815 to 1000."

The Rectified Spirit of Wine, employed in this proceſs, is prepared by diſtillation from the ſpiritous liquors of commerce. It conſiſts of alkohol with a portion of water. The Potaſh, employed in the preſent proceſs, abſtracts the greater part of this water, by the ſtrong attraction it exerts to it; and, by a careful diſtillation, the alkohol is obtained, if not entirely, at leaſt nearly pure.

The ſpecific gravity required in the alkohol employed in the proceſſes of the Edinburgh Pharmacopœia, is only 835; and, though at that ſtandard, it muſt contain a portion of water, it is ſufficiently ſtrong for all pharmaceutical purpoſes.

CHAP. XVI.

OLEA VOLATILIA, *olim* OLEA STILLATITIA *vel* ESSENTIALIA. VOLATILE OILS, DISTILLED or ESSENTIAL OILS.

THE chemical properties of eſſential oils have already been deſcribed. They differ ſomewhat in their ſenſible qualities, but all of them are highly odorous and pungent; and, as medicines, they poſſeſs a ſtimulating power. They are generally employed as corrigents, to improve the flavour and taſte of the medicines with which they are mixed, to cauſe them to ſit eaſier on the ſtomach, or obviate any unpleaſant ſymptoms they may be apt to produce.

As theſe oils frequently exiſt in diſtinct veſicles in the vegetable, ſome of them may be obtained by expreſſion; but, in general, they are procured by diſtillation. The rules given in the Edinburgh Pharmacopœia are the following:

“ Theſe oils are to be prepared in the ſame manner as the Diſtilled Waters, except that a ſmaller quantity of water is to be added. Seeds and roots are to be previouſly bruiſed or raſped. The oil accompanies the water, and is afterwards ſeparated from it, according as it is lighter or heavier, by ſwimming on the ſurface or falling to the bottom.

“It is alſo to be obſerved with regard to the preparation of theſe diſtilled waters and oils, that, from the goodneſs of the ſubſtances, their texture, the ſeaſon of the year, and ſimilar circumſtances, ſo many differences muſt ariſe, that it is ſcarcely poſſible to give any certain and general rules which ſhall apply ſtrictly to every example. Many things therefore are omitted, to be regulated according to the judgment of the operator, the moſt general precepts only being delivered.”

The qualities of theſe oils are conſiderably varied by a number of circumſtances, more eſpecially by climate, ſoil, and ſeaſon. They are likewſe injured by too long keeping. Being high priced, they are alſo frequently adulterated by dilution with alkohol, by the addition of an expreſſed oil, or by intermixture with each other, the cheaper being uſed to adulterate the more valuable. The firſt is detected by the milkineſs produced and continuing for ſome time, on dropping the adulterated oil on water; the ſecond, by the ſophiſticated oil leaving a permanent greaſy ſpot on paper; and the third may, in general, be diſcovered by the ſmell of the coarſer oil, rendering it more ardent if neceſſary, by the application of a gentle heat.

It is not neceſſary to notice particularly the different eſſential oils, as they poſſeſs merely the aromatic quality of the vegetables from which they are prepared. The following are thoſe inſerted in the Edinburgh Pharmacopœia:

Oleum Menth. Pip.

OLEUM HERBÆ MENTHÆ PIPERITÆ FLORENTIS. OIL OF PEPPERMINT.

OLEUM HERBÆ JUNIPERI SABINÆ. OIL OF SAVINE.

Ol. Roriſmar.

OLEUM SUMMITATUM FLORENTIUM RORISMARINI OFFICINALIS. OIL OF ROSEMARY.

Ol. Lavend.

OLEUM SPICARUM FLORENTIUM LAVANDULÆ SPICÆ. OIL OF LAVENDER.

Ol. Eſſ. Aniſi.

OLEUM SEMINUM PIMPINELLÆ ANISI. OIL OF ANISE.

OLEUM BACCARUM JUNIPERI COMMUNIS. OIL OF JUNIPER.

Ol. Junip. Bacc.

OLEUM RADICIS LAURI SASSAFRAS. OIL OF SASSAFRAS.

Ol Rad. Saſſafras.

OLEUM FRUCTÛS MYRTI PIMENTÆ. OIL OF PIMENTO.

THE London College have alſo ordered,

OLEUM ESSENTIALE CARUI. OIL OF CARAWAY.

OLEUM MENTHÆ SATIVÆ. OIL OF SPEARMINT.

OLEUM ORIGANI. OIL OF WILD THYME.

OLEUM PULEGII. OIL OF PENNYROYAL.

OLEUM SUCCINI ET ACIDUM SUCCINI. OIL AND ACID OF AMBER.

Sal et Oleum Succini.

" Take of Amber in powder, Pure Sand, equal parts. Put them mixed into a glaſs retort, of which they ſhall fill one-half. Having adapted a large receiver, diſtil from a ſand-bath, with a fire gradually raiſed. Firſt, a watery liquor with a little of a yellow oil, will diſtil; then a yellow oil with an acid ſalt; afterwards, a reddiſh and black oil.

Pour the liquor out of the receiver, and let the oil be ſeparated from the water. Let the acid ſalt, collected from the neck of the retort, and the ſides of the receiver, be preſſed between folds of bibulous paper, and freed from the adhering oil. Then purify it by ſolution in hot water and cryſtallization."

Amber is a bitumen which ſuffers decompoſition by heat. The acid which it affords is one *ſui generis;* the oil approaches in its properties to the other empyreumatic oils. The acid is never uſed in medicine; the oil is ſometimes employed externally as a ſtimulant, and internally as an antiſpaſmodic, but is alſo falling into diſuſe. A proceſs is ordered in the Pharmacopœia for its purification.

Ol. Succin. Rectif.

OLEUM SUCCINI PURISSIMUM. PURIFIED OIL OF AMBER.

"Diſtil Oil of Amber mixed with ſix times its quantity of Water, from a glaſs retort, until two-thirds of the water have paſſed into the receiver. Then ſeparate this purified volatile oil from the water, and keep it in veſſels well ſtopt."

THE oil thus purified, is at firſt nearly colourleſs, but gradually acquires a brown tinge. Its odour is extremely unpleaſant, its taſte acrid. Its doſe as an antiſpaſmodic is ten drops.

OLEUM TEREBINTHINÆ VOLATILE PURISSIMUM. Ol. Terebinth. Rect.

RECTIFIED OIL OF TURPENTINE.

" Take of Volatile Oil of Turpentine, one pound; Water, four pounds. Diſtil as long as any oil comes over."

OIL of turpentine as obtained, by diſtillation, from what is termed common turpentine (the juice of the larch), is in general ſufficiently pure; this proceſs ſeems therefore unneceſſary.

Two other empyreumatic oils are inſerted in the London Pharmacopœia.

OLEUM ANIMALE. ANIMAL OIL.

" Take of Oil of Hartſhorn, one pound. Diſtil three times."

THIS oil is formed during the decompoſition of bones by heat. By repeated diſtillations, it is rendered rather leſs offenſive. It was once celebrated for its antiſpaſmodic power, but has long been little uſed.

Oleum petrolei. **Oil of petroleum, or Mineral Tar.**

"Diſtil Petroleum in a ſand-bath."

This has been uſed principally as an external ſtimulating application.

CHAP. XVII.

OLEOSA.—OILY PREPARATIONS.

OLEUM AMMONIATUM, *vulgo Linimentum Volatile.* AMMONIATED OIL, commonly called Volatile Liniment.

"Take of Olive Oil, two ounces; Water of Ammonia, two drachms. Mix them."

A MUCH ſtronger preparation is ordered in the London Pharmacopœia, LINIMENTUM AMMONIÆ FORTIUS, conſiſting of Water of Pure Ammonia, one ounce; Olive Oil, two ounces. Another is inſerted under the title LINIMENTUM AMMONIÆ, compoſed of Water of Ammonia (or rather Carbonat of Ammonia), half an ounce; Olive Oil, an ounce and a half, which, both from the nature and proportion of its ingredients, is milder.

Liniment. Ammon Fort.

They are all uſed as rubefacients; and, for this purpoſe, the liniment of the Edinburgh College ſeems beſt adapted.

OLEUM LINI CUM CALCE. LINSEED OIL WITH LIME.

"Take of Linſeed Oil, Lime Water, of each equal parts. Mix them."

THIS is uſed as an application to burns.

OLEUM CAMPHORATUM. CAMPHORATED OIL.

"Take of Olive Oil, two ounces; Camphor, half an ounce. Mix them, ſo as that the camphor may be diſſolved."

THIS is a form under which camphor is frequently applied externally as a ſtimulant and anodyne.

OLEUM SULPHURATUM. SULPHURATED OIL.

Ol. Sulphur.

"Take of Olive Oil, eight ounces; Sublimed Sulphur, one ounce. Boil with a gentle fire, in a large iron pot, ſtirring conſtantly until they unite."

THIS ſolution of ſulphur in oil was once recommended as an expectorant, in a doſe of twenty or thirty drops, and was uſed in aſthma and phthiſis, but is now altogether diſcarded from practice.

Beſides this preparation, which has a place in the London Pharmacopœia, there is alſo ordered to be prepared in the ſame manner, a ſolution of oil in petroleum, PETROLEUM SULPHURATUM. Its qualities are the ſame with thoſe of the other.

CHAP. XVIII.

SALES ET *SALINA.*—SALTS AND SALINE SUBSTANCES.

IT is not eaſy to give a preciſe definition of the term Salt. It was formerly ſuppoſed to denote a body eminently ſapid, ſoluble in water, cryſtallizable, fuſible, and uninflammable. But theſe properties are not poſſeſſed by many bodies ſuppoſed to belong to the claſs of Salts, and they belong to others which are arranged under other claſſes of chemical agents.

The definition of Salts, in the language of modern chemiſtry, ſeems rather to be taken from their compoſition, than from their properties. It is thus underſtood to be applied to the ſubſtances known by the name of Acids, to thoſe entitled Alkalies, and to all the compounds formed by the Combinations of Acids with Alkalies, Earths, and Metallic Oxyds. The acids and alkalies are termed Primary, the other Secondary or Neutral Salts.

The general chemical qualities of the Acids, Alkalies, and Neutral Salts, and their nomenclature, have already been noticed in the firſt part of this work. The firſt ſaline combinations in the Pharmacopœia are thoſe of the Acids.

* * *

ACIDUM ACETOSUM DESTILLATUM. DISTILLED ACETOUS ACID.

Acetum Diſtillat.

"Diſtil eight pounds of Acetous Acid in glaſs veſſels, with a gentle fire. The two pounds that firſt come over are to be rejected as too watery; the four pounds which follow are the diſtilled acetous acid. The reſiduum affords a ſtill ſtronger acid, but too much burnt."

VINEGAR, as it is produced by fermentation, conſiſts of acetous acid, largely diluted with water, and mixed with a number of other ſubſtances,—tartarous acid, extractive, mucilaginous, and ſaccharine matter. From theſe it is purified by diſtillation, but it is ſtill largely diluted with water, as the pure acid is not even ſo volatile as water; and, in general, it receives from the diſtillation ſomewhat of an empyreumatic odour. The proceſs ſhould be conducted in glaſs veſſels, as directed in the Pharmacopœia ; as, from metallic ones, the acid would receive an impregnation that might prove noxious.

Diſtilled acetous acid is chiefly employed as a ſolvent of ſome vegetable ſubſtances, and in making ſome of the ſalts.

ACIDUM ACETOSUM FORTE. STRONG ACETOUS ACID.

"Take of Dried Sulphat of Iron, one pound ; Acetite of Lead, ten ounces. Rub them together. Put them into a retort, and diſtil from ſand with a moderate fire, as long as any acid comes over."

ACIDUM ACETOSUM. ACETOUS ACID. *Pharm. Lond.*

"Take of Verdigriſe, in coarſe powder, two pounds. Dry it perfectly in a bath of water, ſaturated with ſea ſalt. Then diſtil in a ſand-bath, and diſtil the liquor a ſecond time. Its ſpecific gravity is, to that of diſtilled water, as 1050 to 1000."

THESE two proceſſes furniſh a powerful acid; but the reſult of reſearches on this ſubject is ſuch, that it is ſomewhat uncertain whether theſe two concentrated acids differ eſſentially from each other, and whether they differ except in ſtrength from the diluted acetous acid.

In the firſt proceſs, that of the Edinburgh Pharmacopœia, the ſulphuric acid of the dried ſulphat of iron combines with the oxyd of lead of the acetite of lead, and diſengages the acetous acid, which, with a portion of water of cryſtallization, diſtils over. Its odour is pungent, its taſte acrid, and its acid powers conſiderable. It ſeems moſt probable that it is merely the concentrated acetous acid.

In the ſecond proceſs, the acid contained in the verdigriſe is expelled by the action of the heat from the oxyd of copper, with which in that ſubſtance it is combined. But it has been generally ſuppoſed, that at the ſame time it ſuffers a chemical change. According to the opinion once received, it receives a portion of oxygen from the oxyd of copper. The experiments of Chaptal appeared afterwards to prove that it was rather deprived of a portion of its carbon, which remained mixed or united with the oxyd of copper; while Adet, and ſtill more lately Darracq, have concluded from experiments, that no difference exiſts between thoſe acids but in ſtrength, the acetous acid being more diluted than the other, and, according to Darracq, containing a portion of mucilaginous and extractive matter. The concentrated acid from verdigriſe is the Acetic Acid of the new nomenclature, the Radical Vinegar of the older chemiſts.

Theſe ſtrong acids are principally uſed as powerful ſtimulants, applied to the noſtrils in languor and aſphyxia. Their odour is pungent and grateful. They are capable alſo of acting as powerful rubefacients.

Flores Benzoës.

ACIDUM BENZOICUM. BENZOIC ACID.

"Take of Benzoin in powder, any quantity. Put it into an earthen pot, to the mouth of which there has been previouſly adapted a paper cone; apply a gentle fire, that the acid may be ſublimed. If it be contaminated with oil, let it be purified by ſolution in hot water, and cryſtallization." (Or, according to the direction o the London College, its purification may be effected by mixing it with white clay, and again ſubliming it).

THIS acid exiſts ready formed in benzoin, and all the balſams, and, as it is volatile, is eaſily ſublimed by heat.

Another proceſs, ſuppoſed to be more economical, was propoſed by Scheele, in which the benzoin powdered is boiled with lime or potaſh, which combines with the benzoic acid; and the benzoat thus formed is decompoſed by ſome other acid. The following is the proceſs of this kind, inſerted in the Pruſſian Pharmacopœia:

" Take of Powdered Benzoin, twenty-four ounces; Carbonat of Soda, eight ounces. Mix them, and boil in ſixteen pounds of Water, ſtirring conſtantly for half an hour. Strain. To the remaining benzoin add ſix pounds of Water. Boil them together, and ſtrain. Mix both liquors, and evaporate to two pounds. Filter the liquor, and add to it, Diluted Sulphuric Acid to ſaturation. The benzoic acid, precipitated under the form of a light greyiſh powder, is to be diſſolved in boiling water; and the ſolution, ſtrained, while hot, through linen, is to be ſet aſide to cryſtallize. The cryſtals are to be waſhed with cold water and dried."

Benzoic acid has been ſuppoſed to poſſeſs ſome expectorant power, and, on this ſuppoſition, enters into the compoſition of the paregoric elixirs of the Pharmacopœias.

Acid. Muriat.

ACIDUM MURIATICUM. MURIATIC ACID.

"Take of Muriat of Soda, two pounds; Sulphuric Acid, ſixteen ounces; Water, one pound. Firſt expoſe the muriat of ſoda in a pot to a red heat for a ſhort time; when cold, put it into a retort. Then pour the acid, mixed with the water, and cold, on the muriat of ſoda. Diſtil from a ſand-bath with a moderate fire, as long as any acid comes over. Its ſpecific gravity is to that of diſtilled water as 1170 to 1000."

THIS proceſs is an example of ſingle affinity. The ſulphuric acid combines with the ſoda of the muriat of ſoda, and the muriatic acid is diſengaged. It combines with the watery vapour, and is thus eaſily condenſed. It has generally a yellowiſh tinge, from the preſence of a ſmall quantity of iron, from which it can be freed by a ſecond diſtillation.

The principal uſe of this acid is for pharmaceutical purpoſes. It can ſcarcely be ſaid to be employed as a medicine.

ACIDUM OXY-MURIATICUM. OXY-MURIATIC ACID.

THOUGH no proceſs is inſerted in any Pharmacopœia for the preparation of this acid, it is applied, both in its pure ſtate and in its combinations, to medicinal uſes.

Uncombined, it has been employed to deſtroy contagion, and is perhaps the moſt effectual of any of the agents that have been uſed for this purpoſe. It is prepared by adding to the materials from which muriatic acid is prepared, black oxyd of manganeſe, in the proportion of one-third of the weight of muriat of ſoda, and applying heat. The ſulphuric acid diſengages the muriatic acid, and this immediately attracting oxygen from the black oxyd of manganeſe, forms oxy-muriatic acid; the vapours of which are diffuſed through the place where the contagion is to be deſtroyed.

Combined with potaſh, it forms a ſalt employed as an anti-venereal remedy. To prepare this ſalt, ſixteen ounces of ſub-carbonat of potaſh are diſſolved in four pounds of water, and the ſolution is repeatedly agitated with eight ounces of lime, to abſtract the carbonic acid. The ſolution of pure potaſh is to be poured into the bottles of Woulfe's apparatus, which are to be connected with a retort, containing three pounds of muriat of ſoda, one pound of black oxyd of manganeſe, and two pounds of ſulphuric acid, previouſly diluted with one pound and a half of water. On applying a moderate heat to the retort by a ſand-bath, the oxy-muriatic acid is diſengaged, and paſſes through the ſolution of potaſh. Inſtead of combining directly, however, with the potaſh, it ſuffers decompoſition; one part of it returns to the ſtate of muriatic acid, the other becomes, what is properly ſpeaking, a ſuper-oxygenated acid. Both ſaturate themſelves with potaſh; and the two ſalts are ſeparated, from their different degrees of ſolubility: the common muriat remains diſſolved, the ſuper-oxygenated muriat cryſtallizes. The cryſtals are waſhed with a ſmall quantity of cold water. They are in ſmall plates of a ſilvery white colour.

The medical uſes of this ſalt have been already mentioned. It is given in ſyphilis in a doſe of of 10 grains three or four times a-day.

ACIDUM NITROSUM. NITROUS ACID.

Acid. Nitroſ.

" Take of Pure Nitrat of Potaſh, beat to powder two pounds; Sulphuric Acid, ſixteen ounces. The nitrat of potaſh being put into a glaſs retort, pour upon it the ſulphuric acid, and diſtil from a ſand-bath with a fire gradually raiſed, until the iron pot is of an obſcure red heat. The ſpecific gravity of this acid is to that of diſtilled water as 1550 to 1000."

IN this proceſs the ſulphuric acid combines with the potaſh, and diſengages the nitric acid. The latter acid, however, partly from the heat employed in the diſtillation, and partly perhaps from the exertion of a diſpoſing affinity, ſuffers a ſlight decompoſition; a ſmall portion of it loſes part of its oxygen, and a quantity of nitrous gas is formed; this is abſorbed by the nitric acid, and forms the nitrous, which is more or leſs coloured and fuming, according to the degree of heat employed in the diſtillation. The reſiduum is ſulphat of potaſh, with an exceſs of ſulphuric acid.

Nitrous acid is extenſively employed as a pharmaceutic agent: from the facility with which it parts with oxygen, it is one of the moſt important. Its powers as a tonic and anti-ſyphilitic remedy, have been already conſidered. In the ſtate of vapour, it has been employed under the form of fumigation to deſtroy contagion; and, though perhaps inferior to oxy-muriatic acid, it has the advantage that it can be applied without requiring the removal of the ſick.

Acidum Nitros. Dilut.

ACIDUM NITROSUM DILUTUM. DILUTED NITROUS ACID.

"Take of Nitrous Acid, Water, equal weights. Mix, avoiding the noxious vapour."

IN combining nitrous acid with water, the greater part of the nitrous gas of the former is diſengaged. The diluted acid is employed in a number of the chemical proceſſes of the Pharmacopœia.

ACIDUM NITRICUM. NITRIC ACID.

"Take of Nitrous Acid, any quantity. Put it into a retort, and a receiver being adapted, apply a very gentle heat until the reddeſt part ſhall have paſſed over, and the acid which remains in the retort ſhall have become nitric."

By the heat applied, the nitrous gas contained in the nitrous acid, and which gives to it the yellow colour and highly fuming property, is expelled, and condenſes in the receiver, combined ſtill with a ſmall portion of acid. The nitric acid remains colourleſs. It is applied to the ſame purpoſes as the nitrous. Little or no difference can exiſt between them in medicinal powers, but the nitric is perhaps more uniform in ſtrength.

SPIRITUS ÆTHERIS NITROSI. SPIRIT OF NITROUS ETHER.

Spirit.
Æther.
Nitros.

"Take of Alkohol, three pounds; Nitrous Acid, one pound. Pour the alkohol into a large phial, placed in a veſſel full of cold water, and add the acid gradually, with conſtant agitation. Cloſe the phial lightly, and ſet it aſide for ſeven days in a cool place; then diſtil the liquor with the heat of boiling water, into a receiver kept cool with water or ſnow, as long as any ſpirit comes over."

This is a ſolution of nitrous ether in alkohol.

To prepare pure nitrous ether is difficult, and not without danger, from the violent chemical action which takes place when ſo much nitrous acid is added as is neceſſary to convert the whole alkohol into ether. This pharmaceutic preparation therefore has been preferred, and, as a medicine, anſwers perhaps all the purpoſes which could be derived from the other. Even it requires caution in its preparation.

The theory of the action of acids on alkohol, and of the formation of ethers, is, notwithſtanding modern reſearches, obſcure; and that of nitrous ether is very imperfectly elucidated. It is aſcertained, however, that during its production, portions of oxalic and acetous acids are formed; and the experiments of Bayen have clearly proved, that a very conſiderable portion of the nitric acid is decompoſed or combined in ſuch a manner with the principles of the alkohol, that it is no longer capable of ſaturating an alkali. Perhaps it may be inferred, that the acid, by parting with oxygen to the elements of the alkohol, cauſes the formation of the oxalic and acetous acids, and that the remaining elements of the alkohol unite to form the ether. It appears to contain more carbon than ſulphuric ether.

The ſpirit of nitrous ether always contains a very ſenſible portion of acid, from which it may be freed by a ſecond diſtillation, with the addition of magneſia or potaſh. But on this acid perhaps ſome of its virtues depend.

Its odour is extremely fragrant, its taſte pungent and acidulous; it is very volatile and inflammable; ſoluble in alkohol and water. It is employed as a refrigerant and diuretic, ſometimes as an antiſpaſmodic. Its doſe is from thirty to fifty drops.

ACIDUM SULPHURICUM DILUTUM. DILUTED SULPHURIC ACID.

Acidum
Vitrioli
Dilut.

"Take of Sulphuric Acid, one part; Water, ſeven parts (in the London Pharmacopœia eight parts). Mix them."

THE preparation of Sulphuric Acid being carried on on a large ſcale, for the purpoſes of commerce, no proceſs is given for it in either of the Pharmacopœias. It is obtained by burning ſulphur mixed with from one-eighth to one-tenth of nitrat of potaſh, in large leaden chambers. By the oxygenation of the ſulphur, the acid is formed, and is abſorbed by water placed in the bottom of the chamber. This liquor, when ſufficiently acidulated, is concentrated by boiling in glaſs retorts, and an acid obtained thick and unctuous in its appearance, colourleſs and tranſparent, having a ſpecific gravity of 1850.

Sulphuric acid prepared in this manner is never perfectly pure. It contains a quantity of ſulphat of potaſh, and ſometimes a ſmall portion of ſulphat of lead. From theſe it is in a great meaſure purified by dilution with water, the diluted acid being incapable of holding them diſſolved. Its doſe is alſo more manageable than that of the concentrated acid. As an aſtringent it is taken to the extent of thirty drops.

ACIDUM SULPHURICUM AROMATICUM. AROMATIC SULPHURIC ACID.

"Take of Alkohol, two pounds; Sulphuric Acid, ſix ounces. Drop the acid gradually into the alkohol. Digeſt the mixture with a very gentle heat in a cloſe veſſel for three days, then add of Bark of Cinnamon, one ounce and a half; of Ginger, one ounce. Digeſt again in a cloſe veſſel for ſix days; then ſtrain through paper placed in a glaſs funnel."

Some chemical action may be exerted on the alkohol by the acid during the digeſtion, but the acidity is little impaired. The aromatics render it more pleaſant, and the preparation may be conſidered as a grateful one for the exhibition of ſulphuric acid. Its doze is thirty drops.

ÆTHER SULPHURICUS. SULPHURIC ETHER.

Æther Vitriolicus.

"Take of Sulphuric Acid, Alkohol, of each thirty-two ounces. Pour the alkohol into a glaſs retort, capable of bearing a ſudden heat. Then pour on the acid in an uninterrupted ſtream. Mix them gradually by frequent and gentle agitation; then immediately diſtil from a ſand-bath, previouſly heated for this purpoſe, into a receiver kept cool with water or ſnow. But regulate the heat in ſuch a manner that the liquor may be made to boil as ſoon as poſſible, and continue to boil until ſixteen ounces have diſtilled over; then remove the retort from the ſand. To the diſtilled liquor add two drachms of Potaſh, then diſtil again from a high-necked retort, with a very gentle heat, into a receiver kept cool, until ten ounces have paſſed over. If to the acid remaining in the retort after the firſt diſtillation, ſixteen ounces of Alkohol be added, and the diſtillation repeated, ether will again be produced. And this may be often repeated."

In the formation of ſulphuric ether, it is found by experiment that the alkohol ſuffers decompoſition ; a portion of its carbon is ſeparated in a ſenſible form, and renders the reſidual liquor thick and dark coloured ; a quantity of water is formed, and the remaining elements of the alkohol unite to form the ether. Ether differs from alkohol in containing leſs carbon, or rather more hydrogen ; and this difference is eſtabliſhed, not only by the facts with regard to its formation, but likewiſe by the comparative products of their combuſtion.

With regard to the agency of the ſulphuric acid, by which theſe changes are effected in the compoſition of the alkohol, two opinions are at preſent maintained by chemiſts. According to the older doctrine, part of the ſulphuric acid is decompoſed ; its oxygen combines with a portion of the hydrogen of the alkohol, and forms water ; the balance of attractions among the elements of the alkohol being broken, carbon is depoſited, and ether formed from a new combination of theſe remaining elements.

Fourcroy and Vauquelin have denied that any decompoſition of the acid is neceſſary for the formation of ether. They ſuppoſe that it acts ſolely by a diſpoſing affinity cauſing part of the oxygen and part of the hydrogen of the alkohol to enter into a binary combination to form water; whence reſults the exertion of new affinities, by which carbon is ſeparated and ether formed.

The experiments from which this latter opinion has been deduced, are not unexceptionable; and the facts that no acid which does not part with oxygen can form ether, while acids which part with that principle readily, form it with facility, favour the ſuppoſition that the ſulphuric acid occaſions the formation of ether, by yielding part of its oxygen to the hydrogen of the alkohol.

The principal difficulty in conducting this proceſs, is to ſtop it at the proper period; that is, when the formation of ether ceaſes, and ſulphurous acid begins to be diſengaged. This is beſt known by the neck of the retort being obſcured with white fumes: when theſe appear, the fire muſt be immediately lowered or removed, as otherwiſe the liquor in the retort would ſwell up and paſs over into the receiver.

The ether obtained by the firſt diſtillation is impure. It is diluted with water and alkohol, and impregnated generally with ſulphurous acid. It is rectified, according to the directions in the Pharmacopœia, by diſtilling it a ſecond time with a very gentle heat, with the addition of potaſh, which attracts the ſulphurous acid; or, what ſucceeds better, with the addition of black oxyd of manganeſe, which converts that acid into ſulphuric.

Ether properly prepared, has a penetrating diffuſive odour, and a very pungent taſte. It is highly volatile, evaporating rapidly at the common temperature of the atmoſphere. It is ſoluble in ten parts of water, and combines with alkohol in every proportion.

Its virtues as a narcotic and antiſpaſmodic have been already ſtated. Its doſe is half a drachm.

ÆTHER SULPHURICUS CUM ALCOHOLE. SULPHURIC ETHER WITH ALKOHOL.

"Take of Sulphuric Ether, one part; Alkohol, two parts. Mix them."

By this dilution of ether with alkohol, little is gained, except that it is more ſoluble in water. It was formerly known by the name of Spirit of Vitriolic Ether. The London College apply that name (Spiritus Ætheris Vitriolici) to ether obtained by the firſt diſtillation and unrectified. They order alſo a COMPOUND SPIRIT OF VITRIOLIC ETHER to be prepared by mixing two pounds of unrectified ether with three drachms of oil of wine,—a ſubſtance of an oily-like appearance, which diſtils over when the formation of ether has nearly ceaſed. All theſe preparations may be regarded as ſuperfluous.

Spirit. Æther. Vitriolic. Compoſit.

ÆTHER SULPHURICUS CUM ALCOHOLE AROMATICUS. AROMATIC SULPHURIC ETHER WITH ALKOHOL.

"This is made from the ſame materials, and in the ſame manner as the compound tincture of cinnamon, unleſs that Sulphuric Ether with Alkohol is uſed in place of diluted alkohol."

The additions to the ſulphuric ether in this formula, are of ſo little importance, that the preparation is ſcarcely ever uſed.

Ammonia Præparata.

Carbonas ammoniæ: *olim Ammonia Præparata.* Carbonat of ammonia.

"Take of Muriat of Ammonia, one pound; Carbonat of Lime, commonly called Chalk, dried, two pounds. Each being ſeparately reduced to powder, mix them and ſublime from a retort into a receiver kept cold."

This proceſs is an example of double elective attraction. The muriatic acid of the muriat of ammonia combines with the lime of the carbonat of lime, and the carbonic acid of the latter unites with the ammonia of the former. The carbonat of ammonia which is formed is ſublimed, and is obtained in a cryſtalline cake. When the proceſs is carried on in the large way, the ſublimation is generally performed from an iron pot, to which the heat is directly applied.

According to the experiments of Mr Davy, carbonat of ammonia varies much in the proportion of its ingredients from the heat applied in its preparation; that formed at a temperature of 300° containing 50 parts of alkali in the 100; while that produced at a temperature of 60° contained only 20 parts. Its ſmell is always pungent and ammoniacal: it is eaſily volatile, very ſoluble in water, and effloreſcent on expoſure to the air. Its medicinal applications are às a ſtimulant to the noſtrils in fainting, and as a ſtimulant and diaphoretic, taken internally in a doſe of from five to fifteen grains.

AQUA CARBONATIS AMMONIÆ: *olim, Aqua Ammoniæ.* WATER OF CARBONAT OF AMMONIA.

Aq. Ammoniæ.

"Take of Muriat of Ammonia, Carbonat of Potaſh, of each ſixteen ounces; Water, two pounds. To the ſalts, mixed and put into a glaſs retort, add the water; then diſtil from a ſand-bath with a fire gradually raiſed, to dryneſs."

IN this preparation of carbonat of ammonia by the humid way, carbonat of lime could not be employed to decompoſe the muriat of ammonia; carbonat of potaſh is therefore employed. The potaſh attracts the muriatic acid, the ammonia the carbonic acid. The carbonat of ammonia is volatilized, and diſſolved by the watery vapour. The ſolution is applied to the ſame medicinal purpoſes as the concrete ammoniacal carbonat.

LIQUOR VOLATILIS, SAL, *et* OLEUM CORNU CERVI. VOLATILE LIQUOR, SALT, *and* OIL OF HARTSHORN. *Pharm. Lond.*

"Take of Hartſhorn, ten pounds. Diſtil, increaſing the fire gradually. A volatile liquor, ſalt, and oil, come over. The oil and the ſalt being ſeparated, diſtil the liquor three times. To the ſalt add an equal weight of prepared chalk, and ſublime three times, or until it become white. The ſame volatile liquor, ſalt, and oil, may be obtained from any of the parts of animals except fat."

BY expoſing bones to heat, the gelatin they contain ſuffers decompoſition; its principles enter into new combinations, forming chiefly carbonat of ammonia and empyreumatic oil. Theſe are the products of the above proceſs; the carbonat of ammonia being partly diſſolved by the water which diſtils over, and obtained partly in a concrete ſtate. It is ſcarcely poſſible, however, to free it entirely from the empyreumatic oil, which renders it nauſeous; and, though at one time it was ſuppoſed to be poſſeſſed of ſome peculiar virtues, it is now juſtly rejected from practice; and the carbonat of ammonia, obtained pure by the preceding proceſſes, is preferred.

AQUA AMMONIÆ: *olim, Aqua Ammoniæ Cauſticæ.*

WATER OF AMMONIA.

Aq. Ammoniæ Puræ.

"Take of Muriat of Ammonia, ſixteen ounces; Lime, freſh prepared, two pounds; Water, ſix pounds. To one pound of water in an iron or earthen veſſel, add the lime broken down, and cloſe the veſſel for twenty-four hours, until the lime fall into a fine powder, which put into a retort. To this add the Muriat of Ammonia, diſſolved in five pounds of Water, and, ſhutting the mouth of the retort, mix them by agitation. Laſtly, diſtil with a heat ſo moderate, that the operator can eaſily apply his hand to the retort, into a receiver kept cold, until twenty ounces have diſtilled over. In this diſtillation the veſſels are to be ſo luted as to confine effectually the penetrating vapours."

THE lime in this proceſs attracts the muriatic acid of the muriat of ammonia, and the ammonia is diſengaged. By itſelf it is incondenſible, but it combines with the watery vapour, and forms an aqueous ſolution. To conduct the proceſs to advantage, a ſeries of receivers is neceſſary in which water is diſpoſed, to abſorb entirely the ammoniacal gas.

When water is perfectly ſaturated with ammonia, 100 grains are found to combine with 34; but, in the uſual mode of preparing this ſolution, this perfect ſaturation is never effected. The ſolution has a ſtrong pungent ſmell, a very acrimonious taſte, and inflames the ſkin. It is uſed in medicine as a powerful ſtimulant and diaphoretic internally, in a doſe of twenty drops; externally, as a ſtimulant and rubefacient.

Spiritus Ammoniæ.

ALCOHOL AMMONIATUM, *ſive Spiritus Ammoniæ.*

AMMONIATED ALKOHOL.

"Take of Diluted Alkohol, four pounds; Muriat of Ammonia, four ounces; Carbonat of Potaſh, ſix ounces. Mix, and draw off by diſtillation with a gentle fire, two pounds."

THOUGH in this proceſs carbonat of ammonia is the principal product, from the decompoſition of the muriat of ammonia by the carbonat of potaſh, yet, from the potaſh not being fully ſaturated with carbonic acid, a quantity of pure ammonia is diſengaged, and combines with the alkohol. A part of the water alſo of the diluted alkohol diſtilling over, diſſolves a portion of the carbonat of ammonia. The compound has the pungent ammoniacal ſmell. It is uſed principally as the menſtruum of ſome vegetables with which ammonia coincides in medicinal operation.

ALCOHOL AMMONIATUM AROMATICUM, *ſive Spiritus Ammoniæ Aromaticus*. AROMATIC AMMONIATED ALKOHOL.

Spirit.
Ammon.
Comp.

"Take of Spirit of Ammonia, eight ounces; Volatile Oil of Roſemary, one drachm and a half; Volatile Oil of Lemon, one drachm. Mix ſo as to diſſolve the oils." In the London Pharmacopœia, Oil of Cloves is ordered in place of oil of roſemary.

By this combination of the ammonia with the alkohol, and the addition of the aromatic oils, it is rendered more grateful than the water of ammonia. This preparation is therefore ſometimes uſed in preference to the other, as a ſtimulating perfume, and even for internal exhibition. Its doſe is from fifteen to thirty drops.

Spirit. Ammon. Fœtid.

ALCOHOL AMMONIATUM FOETIDUM, *ſive Spiritus Ammoniæ Fœtidus.* FOETID AMMONIATED ALKOHOL.

"Take of Spirit of Ammonia, eight ounces; Aſſafœtida Gum-Reſin, half an ounce. Let them digeſt in a cloſe veſſel for twelve hours; then diſtil eight ounces by the heat of a water-bath."

THE impregnation of the ammoniated alkohol with part of the aſſafœtida in this proceſs, though it may communicate a fœtid ſmell, can ſcarcely add to its activity. It has been given in hyſteria in a doſe of thirty drops.

SPIRITUS AMMONIÆ SUCCINATUS. *Pharm. Lond.* SUCCINATED SPIRIT OF AMMONIA.

"Take of Alkohol, one ounce; Water of Pure Ammonia, four ounces; Rectified Oil of Amber, one ſcruple; Soap, ten grains. Digeſt the ſoap and the oil of amber in the alkohol, until they are diſſolved. Then add the water of pure ammonia, and mix by agitation."

THIS has been principally uſed as a ſtimulating perfume, under the name of *Eau de Luce*. For the preparation of the compound, ſold under this name, the above formula is imperfect.

CARBONAS POTASSÆ. CARBONAT OF POTASH.

Kali Præparatum.

"Let impure Carbonat of Potaſh, (which in Engliſh is named Pearl-Aſhes,) be put into a crucible, and brought to a red heat, that the oily impurities, if any are preſent, may be burnt out; then rubbing it with an equal weight of water, mix them thoroughly by agitation. The liquor, after the impurities have ſubſided, being poured off into a clean iron-pot, is to be boiled to dryneſs, ſtirring the ſalt conſtantly towards the end of the boiling, that it may not adhere to the veſſel."

THE Pearl-Aſhes of commerce are obtained by the incineration of the wood of land vegetables. They conſiſt of ſub-carbonat of potaſh, with ſulphat and muriat of potaſh, ſiliceous earth, and a ſmall quantity of metallic matter. From theſe they are in a conſiderable degree purified by the preſent proceſs. The one given in the London College is, in one reſpect, preferable;

the ſolution obtained from the pearl-aſhes being evaporated till a pellicle appears on its ſurface, and being then ſet aſide, before farther evaporation, that the ſulphat or muriat of potaſh which it may contain in ſolution may be ſeparated by cryſtallization. The ſalt obtained by either proceſs is a ſub-carbonat of potaſh, or potaſh imperfectly ſaturated with carbonic acid. It is in white grains, is deliqueſcent, and poſſeſſes the alkaline properties.

CARBONAS POTASSÆ PURISSIMUS, *olim, Sal Tartari.* PURE CARBONAT OF POTASH, *formerly Salt of Tartar.*

" Take of impure Super-Tartrite of Potaſh, any quantity. Having wrapped it up in moiſt bibulous paper, or put it into a crucible, burn it into a black maſs, by placing it among live coals. Having reduced it to powder, ſubject it to a moderate heat, in an open crucible, until it become white, or at leaſt of an aſh-grey colour, care being taken that it do not melt. Then diſſolve it in warm water, ſtrain the liquor through linen, and evaporate it in a clean iron veſſel, ſtirring the matter conſtantly towards the end of the evaporation, with an iron ſpoon, that it may not adhere to the bottom of the veſſel. A very white ſalt will remain, which is to be left a little longer on the fire, until the bottom of the veſſel is nearly at a red heat. When cold, it is to be kept in glaſs veſſels, well ſtopt."

By expoſing the ſuper-tartrite of potaſh to heat, the tartarous acid is decompoſed. Part of its carbon and oxygen unite, and form carbonic acid, which is attracted by the potaſh; and, by continuing the heat, the remaining carbonaceous matter is burnt out. By diſſolving the ſaline matter, the portion of lime, and any other earthy or metallic matter which the ſuper-tartrite may have contained are ſeparated, and, by evaporation, a ſalt is obtained, which, like the former, is a ſub-carbonat of potaſh, but more pure.

The uſes of this ſalt as an antacid and diuretic, have been already mentioned.

AQUA POTASSÆ, *vulgo Lixivium Cauſticum.* WATER OF POTASH.

Aqua Kali Puri.

"Take of newly prepared Lime, eight ounces; Carbonat of Potaſh, ſix ounces. Put the lime into an iron or earthen veſſel, with twenty-eight ounces of warm water. The ebullition being finiſhed, immediately add the ſalt; and the whole being well mixed, cloſe the veſſel till they become cold. Let the cold materials, previouſly well agitated, be poured into a glaſs funnel, the throat of which is obſtructed with clean linen. Cover the upper orifice of the funnel, while the neck of it is inſerted in another glaſs veſſel, that the water of potaſh may gradually drop through the linen into the lower veſſel. When it firſt ceaſes to drop, pour into the funnel ſome ounces of water, but cautiouſly, ſo that it may ſwim above the matter. The water of potaſh will again begin to drop. In this manner the affuſion of water is to be repeated, until three pounds have filtered, which will be in the ſpace of two or three days. The upper parts of the liquor are to be mixed with the lower by agitation, and it is to be kept in a veſſel well ſtopt."

LIME having a ſtronger attraction to carbonic acid than potaſh has, attracts that acid from the ſub-carbonat, and leaves the potaſh pure. Strictly ſpeaking, indeed, the whole of the carbonic acid is not abſtracted; ſince, in conſequence of the law of chemical affinity, that quantity, to a certain extent, counteracts the force of attraction, a part of the carbonic acid ſtill remains combined with the potaſh, and, to obtain potaſh perfectly pure, a proceſs much more operoſe is neceſſary. But, for any medicinal or pharmaceutic purpoſe, the potaſh exiſting in this ſolution is in a ſtate of ſufficient purity, at leaſt if the directions in the Pharmacopœia are ſtrictly obſerved. Its medicinal uſes as a lithontriptic and antacid have been already conſidered.

AQUA SUPER-CARBONATIS POTASSÆ. WATER OF SUPER-CARBONAT OF POTASH.

"Take of Water, ten pounds; Pure Carbonat of Potaſh, one ounce. Diſſolve, and expoſe the ſolution to the current of Carbonic Acid Gas which ariſes from three ounces of Powdered Carbonat of Lime, three ounces of Sulphuric Acid, and three pounds of Water, gradually and cautiouſly mixed. The chemical apparatus invented by Dr Nooth is well adapted to this preparation. But, if a larger quantity of the ſolution is required, the apparatus of Woulfe is preferable. The colder the air is, and the greater the preſſure, the better will be the liquor. It ought to be kept in veſſels well ſtopt."

Potash, when uſed as a lithontriptic, irritates the ſtomach and bladder ſo much, that its uſe cannot well be long continued. But, when ſuper-ſaturated with carbonic acid, as it is in this preparation, it is much more pleaſant and leſs irritating; and, though its lithontriptic or real ſolvent power is diminiſhed, or perhaps entirely loſt, it is capable of acting as a palliative, and of being continued for any length of time. It is taken to the extent of one, or even two pounds in the day. When properly prepared, it is pungent and acidulous, and ſparkles when poured into a glaſs.

Natron Præparatum.

Carbonas sodæ, *olim Sal Alkalinus Fixus Foſſilis Purificatus.* Carbonat of soda.

"Take of Impure Carbonat of Soda, any quantity. Bruiſe it, and boil in water until all the ſalt is diſſolved. Strain the ſolution through paper, and evaporate it in an iron veſſel, that after it has cooled cryſtals may form."

Impure Carbonat of Soda, the Barilla of commerce, is obtained from the incineration of certain marine plants. It conſiſts of carbonat of ſoda, with charcoal, oxyd of iron, and various other impurities. From theſe it is in a great meaſure freed by ſolution and cryſtallization. The cryſtals are rhomboidal, and contain a large quantity of water of cryſtallization. This ſalt has been uſed principally as a lithontriptic, under the form of the watery ſolution ſuper-ſaturated with carbonic acid, or that of the Soda Pill.

AQUA SUPER-CARBONATIS SODÆ. WATER OF SUPER-CARBONAT OF SODA.

" This is prepared from ten pounds of Water, and two ounces of Carbonat of Soda, in the ſame manner as the water of ſuper-carbonat of potaſh."

IT is uſed as a lithontriptic, in the ſame doſe as the water of ſuper-carbonat of potaſh, and has generally been preferred to it, on the ſuppoſition of being more pleaſant.

AQUA ACETITIS AMMONIÆ, *vulgo Spiritus Mindereri.* WATER OF ACETITE OF AMMONIA.

Aqua Ammoniæ Acetatæ.

" Take of Carbonat of Ammonia, any quantity.

ty. Pour on it as much Diſtilled Acetous Acid as may be neceſſary to ſaturate exactly the ammonia."

In this preparation, the acetous acid combines with the ammonia, and the carbonic acid is diſengaged with effervеſcence. The acetite of ammonia remains diſſolved in the water. As the ſtrength of diſtilled vinegar is not always the ſame, that of this ſolution muſt be variable; an inconvenience not eaſily obviated. It is given as a diaphoretic, in divided doſes of one ounce.

Kali Acetatum.

ACETIS POTASSÆ. ACETITE OF POTASH.

" Take of Pure Carbonat of Potaſh, any quantity. Boil it with a gentle heat in four or five times its weight of Diſtilled Acetous Acid, and add more acid at different times, until, on the watery part of the former portion being nearly diſſipated by evaporation, the acid newly added excite no effervеſcence: this will happen when about twenty parts of acid have been conſumed. Then let it be ſlowly dried. Let the remaining impure ſalt be liquefied with a gentle heat, for a ſhort time; then diſſolved in water, and ſtrained ed through paper. If the melting has been properly done, the ſtrained liquor will be limpid; if not, of a brown colour. Afterwards evaporate with a very gentle heat this liquor, in a ſhallow glaſs veſſel, ſtirring the ſalt while it concretes, that it may more quickly be brought to dryneſs. Laſtly, the acetite of potaſh ought to be kept in a glaſs veſſel, well cloſed, that it may not liquefy by the action of the air."

It is obvious, that, in this proceſs, the acetous acid combines with the potaſh, diſengaging the carbonic acid. The acetite of potaſh, obtained by the evaporation, is of a browniſh colour, from the preſence, either of ſome extractive matter contained in the vinegar, or of carbonaceous matter, from a partial decompoſition of the acid. It is freed from this by the fuſion which is directed; and, by the ſecond ſolution and evaporation, it is obtained in the form of a white foliated maſs, extremely deliqueſcent.

This ſalt was at one time celebrated as a diuretic, in a doſe of one or two drachms; but it has now nearly fallen into diſuſe.

Kali Purum.

POTASSA, *olim Cauſticum Commune Acerrimum.* POTASH.

"Take of Water of Potaſh, any quantity. Evaporate it in a covered clean iron veſſel, until, when the ebullition is finiſhed, the ſaline matter flow ſmoothly like oil, which will happen before the veſſel is at a red heat. Then pour it on a clean iron plate; cut it into ſmall maſſes before it hardens, and immediately put them into a phial well ſtopt."

POTASH in this form is uſed as a cauſtic; it quickly erodes animal matter, and, mixed with ſoap, has been uſed to open an ulcer.

Calx cum Kali Puro.

POTASSA CUM CALCE, *olim Cauſticum Commune Mitius.* POTASH WITH LIME.

"Take of Water of Potaſh, any quantity. Evaporate it to one-third in a covered iron veſſel; then mix with it as much newly ſlaked Lime as may be ſufficient to give it the conſiſtence of a ſolid paſte, which is to be kept in a ſtopt veſſel."

As a cauſtic, this is milder than the former, and is alſo leſs deliqueſcent.

SULPHAS POTASSÆ: *olim, Tartarum Vitriolatum.* Kali Vitriolat.

SULPHAT OF POTASH.

" Take of Sulphuric Acid, diluted with ſix times its weight of Water, any quantity. Put it into a large glaſs veſſel, and gradually drop into it, of Carbonat of Potaſh, diſſolved in ſix times its weight of Water, as much as may be neceſſary to the perfect ſaturation of the acid. The efferveſcence being over, ſtrain the liquor through paper; and, after due exhalation, put it aſide, that cryſtals may form. Sulphat of Potaſh may alſo be conveniently made, by diſſolving the reſiduum of the diſtillation of Nitrous Acid in Warm Water, and ſaturating it with Carbonat of Potaſh."

IN the former of theſe proceſſes, the ſulphuric acid unites with the potaſh of the carbonat of potaſh, and expels the carbonic acid with effervefcence. In the latter, which is the one generally followed, the exceſs of ſulphuric acid attached to the ſulphat of potaſh, which remains after the diſtillation of nitrous acid, is ſaturated by the addition of a ſufficient quantity of potaſh. The ſalt forms an irregular cryſtalline maſs; it has a very bitter taſte, and is ſparingly ſoluble in water. Its virtues are thoſe of a cathartic; its doſe half an ounce.

SULPHAS POTASSÆ CUM SULPHURE, *olim Sal Polychreſtus.* SULPHAT OF POTASH WITH SULPHUR.

"Take of Nitrat of Potaſh in powder, Sublimed Sulphur, equal weights. Throw them well mixed, in ſmall quantities at a time, into a red-hot crucible. The deflagration being finiſhed, let the ſalt cool, and keep it in a glaſs phial, well ſtopt."

THE nitrat of potaſh being decompoſed by the red heat, affords oxygen to the ſulphur, in ſuch proportions as to convert it into ſulphuric and ſulphurous acids. Both acids are attracted by the potaſh. In its medicinal qualities, this ſaline compound does not appear to differ from the ſulphat of potaſh; and it is ſoon converted into it, by expoſure to the air.

Kali Tartariſatum.

TARTRIS POTASSÆ, *olim Tartarum Solubile.* TARTRITE OF POTASH.

"Take of Carbonat of Potaſh, one pound; Super-Tartrite of Potaſh, three pounds, or as much as may be neceſſary; Boiling Water, fifteen pounds. To the carbonat of potaſh diſſolved in the water, add, by ſmall quantities, the Super-Tartrite of Potaſh rubbed to a fine powder, as long as it excites effervescence, which generally ceaſes before three times the weight of the carbonat of potaſh have been thrown in. Then ſtrain the liquor, when cold, through paper; and, after due exhalation, put it aſide that cryſtals may form."

THE exceſs of tartarous acid in the ſuper-tartrite of potaſh, is ſaturated by the potaſh of the carbonat of potaſh, and the proper neutral ſalt formed. It is not eaſily cryſtallized. In its preparation, therefore, the ſolution is uſually evaporated to dryneſs.

This ſalt has a bitter taſte; it is very ſoluble in water, requiring only four parts of cold water for its ſolution. As a purgative, it is given in the doſe of one ounce.

TARTRIS POTASSÆ ET SODÆ, *olim Sal Rupellenſis.* TARTRITE OF POTASH AND SODA. Natron Tartariſatum.

"This is prepared from Carbonat of Soda and

Super-Tartrite of Potaſh, in the ſame manner as Tartrite of Potaſh."

The exceſs of tartarous acid in the acidulous tartrite of potaſh, being ſaturated in this preparation with ſoda, a triple ſalt is formed. It cryſtallizes in rhomboidal priſms; is ſoluble in five parts of water at 60°; has a bitter ſaline taſte. It is employed as a cathartic, in the doſe of one ounce; and is often preferred, as being leſs diſagreeable than the greater number of the ſaline cathartics.

PHOSPHAS SODÆ. PHOSPHAT OF SODA.

"Take of Bones, burnt to whiteneſs and reduced to powder, ten pounds; Sulphuric Acid, ſix pounds; Water, nine pounds. Mix the powder in an earthen veſſel with the ſulphuric acid; then add the water, and again mix. Keep the veſſel in a water-bath for three days; at the end of which, dilute the matter, by adding other nine pounds of Boiling Water, and ſtrain through a ſtrong linen-cloth, pouring over it gradually, boiling water, until the whole acid is waſhed out. Put aſide the ſtrained liquor, that the impurities may ſubſide, from which pour it off, and, by evaporation, reduce it to nine pounds. To this liquor, again poured off from the impurities, and heated in an earthen veſſel, add Carbonat of Soda diſſolved in warm water, until the effervescence ceaſe. Then ſtrain, and put it aſide, that cryſtals may form. Theſe being removed, add, if neceſſary, to the liquor, a little Carbonat of Soda, that the phoſphoric acid may be exactly ſaturated; and prepare it by evaporation, again to form cryſtals, as long as theſe can be produced. Laſtly, let the cryſtals be kept in a veſſel well ſtopt."

The white reſiduum of burnt bones conſiſts chiefly of phoſphat of lime. The ſulphuric acid decompoſes it, by combining with the lime; the phoſphoric acid, which is diſengaged, diſſolves, however, a portion of undecompoſed phoſphat of lime, forming a ſoluble compound. When carbonat of ſoda is added to the acidulous liquor obtained by waſhing the materials, the ſoda combines with the free phoſphoric acid; the neutral phoſphat of lime, which was combined with that acid, is precipitated, and the phoſphat of ſoda cryſtallizes on evaporation of the ſtrained liquor. Its cryſtals are rhomboidal, efloreſcent, and require for ſolution only four parts of cold water. They conſiſt, according to Thenard, of 19 of ſoda, 15 of acid, and 66 of water. Its taſte is purely ſaline, without any bitterneſs; its medicinal operation is that of a mild cathartic; and, from being leſs nauſeous to the taſte than the other ſalts, it is entitled to preference. Its doſe is one ounce.

Natron Vitriolatum.

SULPHAS SODÆ: *olim, Sal Glauberi.* SULPHAT OF SODA.

"Diſſolve the Acidulous Salt remaining after the diſtillation of muriatic acid, in Water; and add to it Chalk, to remove the ſuperfluous acid. Put it aſide until the impurities have ſubſided; then, having poured off the liquor, and ſtrained it through paper, reduce it by evaporation, that cryſtals may be formed."

IN the decompoſition of muriat of ſoda by ſulphuric acid, to prepare muriatic acid, more ſulphuric acid is uſed than is barely ſufficient; and hence the neceſſity of ſaturating this exceſs by the addition of chalk or carbonat of lime. The neutral ſulphat of ſoda cryſtallizes in hexhaedral priſms; they are effloreſcent and ſoluble in rather leſs than three parts of cold water. This ſalt has been long in uſe as a cathartic, and its value is only leſſened by its nauſeous taſte. Its doſe is an ounce and a half.

SULPHURETUM POTASSÆ: *olim, Hepar Sulphuris.*

Kali Sulphuratum.

"Take of Carbonat of Potaſh, Sublimed Sulphur, of each eight ounces. Having rubbed them together, put them into a large coated crucible; and a cover being adapted to it, apply the fire to it cautiouſly, until they melt. The crucible, after it has cooled, being broken, remove the ſulphuret; and preſerve it in a phial well ſtopt."

DURING the fuſion of theſe two ſubſtances, the ſulphur and potaſh combine, and the carbonic acid is diſengaged. The compound is eaſily fuſible, and is of a brown colour, and inodorous. It is immediately partially decompoſed by water, and portions of ſulphat of potaſh and ſulphurated hydrogen formed. It has been propoſed to be uſed as an antidote to ſome of the metallic poiſons, from the ſuppoſition that the ſulphur would combine with the metallic preparation, and render it inert. From a ſimilar theory, it has been imagined that it might obviate the effects of mercury on the ſyſtem when theſe are too violent: but it is very ſeldom had recourſe to with either intention. The doſe in which it has been propoſed to be given, is from ten to twenty grains three or four times a-day. It is ſaid, in ſome caſes of cancer, to have increaſed the efficacy of cicuta as a palliative, in doſes of five grains.

HYDRO-SULPHURETUM AMMONIÆ. HYDRO-SULPHURET OF AMMONIA.

"Take of Water of Ammonia, four ounces. Expoſe it in a chemical apparatus to the ſtream of gas which ariſes from Sulphuret of Iron, four ounces; Muriatic Acid, eight ounces, previouſly diluted with two pounds and a half of Water. The ſulphuret of iron for this purpoſe is conveniently prepared from three parts of Purified Iron Filings, and one part of Sublimed Sulphur, mixed together, and expoſed in a covered crucible, to a moderate heat, until they unite."

THE ſulphurated hydrogen is produced in this proceſs by the muriatic acid *diſpoſing* the iron to decompoſe part of the water. The hydrogen diſengaged immediately combines with a portion of the ſulphur preſent, and this compound eſcaping in the ſtate of gas, is paſſed through the water of ammonia, with which it unites, and forms a liquor of a dark green colour, and very fœtid odour.

The medicinal qualities of hydro-ſulphuret of ammonia have been already noticed. It is capable of powerfully depreſſing the actions of the ſtomach and general ſyſtem, and has been uſed, principally in diabetes, in a doſe of three or four drops, three or four times a-day.

MURIAS BARYTÆ. MURIAT OF BARYTES.

"Take of Sulphat of Barytes, two pounds; Wood Charcoal in powder, four ounces. Roaſt the ſulphat, that it may be the more eaſily reduced to a fine powder, with which is to be mixed the powdered charcoal. Put the matter into a crucible, to which a cover is adapted, and urge it with a ſtrong fire for ſix hours. Put the matter well rubbed into ſix pounds of Boiling Water, in a cloſed glaſs or earthen veſſel, and mix them by agitation, preventing, as much as poſſible, the acceſs of the air. Let the veſſel ſtand in a water-bath, until the part not diſſolved has ſubſided ; then pour off the liquor. Pour on the reſiduum four pounds of boiling water, which, after agitation and ſubſidence, add to the former liquor. While it is yet hot, or, if it has cooled, after it has been heated, drop into it Muriatic Acid as long as effervescence is excited. Then ſtrain it, and evaporate, that it may cryſtallize."

Sulphat of Barytes may be decompoſed by carbonat of potaſh by double affinity, and perhaps this is the leaſt troubleſome proceſs; but, when done with a view to the medicinal application of the barytes, it has been ſuppoſed defective, as it does not ſeparate the metallic ſubſtances with which the native ſulphat is ſo frequently intermixed. The proceſs of decompoſing it, therefore, by charcoal, has been deemed preferable. The carbonaceous matter attracts the oxygen of the ſulphuric acid ; the ſulphur remains united with the barytes. This ſulphuret of barytes, as well as a portion of hydro-ſulphuret formed during the ſolution, are ſoluble in water ; on dropping in muriatic acid, it combines with the barytes, the ſulphur is precipitated, and the ſulphurated hydrogen diſengaged.

By ſtraining and evaporating the liquor, the muriat of barytes is obtained cryſtallized. It is uſed under the form of ſolution, for which alſo a formula is given:

SOLUTIO MURIATIS BARYTÆ. SOLUTION OF MURIAT OF BARYTES.

"Take of Muriat of Barytes, one part. Diſtilled Water, three parts. Diſſolve."

THE ſaturated ſolution of muriat of barytes was introduced by Dr Crawford, as a remedy in ſcrofulous affections, and has been regarded as a tonic of conſiderable power. It is by no means inert, and the doſe requires to be regulated with ſome care. Five drops are given twice a-day, and gradually increaſed to twenty or more.

SOLUTIO MURIATIS CALCIS. SOLUTION OF MURIAT OF LIME.

"Take of Pure Carbonat of Lime (namely White Marble), in ſmall pieces, nine ounces; Muriatic Acid, ſixteen ounces; Water, eight ounces. Mix the acid with the water, and add gradually the pieces of carbonat of lime. The effervefſcence being finiſhed, digeſt for an hour. Pour off the liquor, and reduce it by evaporation to dryneſs. Diſſolve the reſiduum in its weight and a half of water, and ſtrain."

The muriatic acid, it is obvious, combines with the lime, and diſengages the carbonic acid. The ſolution of muriat of lime has been ſtrongly recommended as a tonic, ſimilar, and not inferior to the muriat of barytes. The doſe is from fifteen to twenty grains of the dried ſalt, or thirty drops of the ſaturated ſolution. to gtt. [illegible]0

Magneſia Alba.

CARBONAS MAGNESIÆ: *olim, Magneſia Alba.*

CARBONAT OF MAGNESIA.

"Take of Sulphat of Magneſia, Carbonat of Magneſia, of each equal weights. Let them be diſſolved ſeparately in twice their weight of warm water, and either ſtrained or otherwiſe freed from impurities. Then mix them, and immediately add eight times their weight of boiling water. Boil the liquor a little, ſtirring it at the ſame time; then allow it to remain at reſt, until the heat be diminiſhed a little, and ſtrain it through linen, on which the carbonat of magneſia will remain. Waſh it with pure water, until it be perfectly taſteleſs."

This is an example of double affinity, the ſulphuric acid of the ſulphat of magneſia combining with the potaſh of the carbonat of potaſh, and the carbonic acid uniting with the magneſia. The uſe of adding the boiling water, and boiling the liquor, is, partly to diſſolve the ſulphat of potaſh, which is a ſalt ſparingly ſoluble, and partly to give the carbonat of magneſia a ſmoothneſs which it has not when this precaution is not obſerved. Carbonat of magneſia, however, is generally prepared on a large ſcale from the Bittern, or liquor remaining after the cryſtallization of muriat of ſoda from ſea-water, which is principally a ſolution of muriat of magneſia: and there are ſome niceties of manipulation requiſite to give it the lightneſs and ſmoothneſs which are valued as marks of its goodneſs.

Carbonat of magneſia, properly prepared, is nearly inſipid; it is extremely light, white, and ſmooth to the touch; is inſoluble in water. It is given as an antacid in a doſe from a ſcruple to a drachm; and the magneſia, by combining with acid in the ſtomach, forms a ſalt which acts as a laxative.

Magneſia Uſta.

MAGNESIA: *olim, Magneſia Uſta.* MAGNESIA.

" Let Carbonat of Magneſia be expoſed in a crucible, to a red heat, for two hours. Then preſerve it in glaſs phials well ſtopt."

BY a red heat, the carbonic acid of the carbonat is expelled, and the pure magneſia remains. It loſes about half its weight. A ſmaller quantity, therefore, of the pure magneſia, will produce the ſame effect as a larger of the carbonat. It is preferred to the latter, where, from the abundant acidity on the ſtomach, flatulence is occaſioned by the diſengagement of carbonic acid when the carbonat is employed.

Chap. XIX.

METALLICA.—METALLIC PREPARATIONS.

The following metals are employed in medical practice: Silver, Quickſilver, Copper, Iron, Tin, Lead, Zinc, Antimony, and Arſenic.

It has already been obſerved, that metals, in their pure ſtate, do not appear to exert any action on the living ſyſtem; their combinations only poſſeſs medicinal virtues.

The oxydation of metals, and the combination of their oxyds with acids, are the chemical changes which communicate to them activity. In general they are more active, in proportion as they are more highly oxydated, and are ſtill more ſo when combined with acids. Oxygen is not, however, to be regarded, according to a modern hypotheſis, as the ſource of their activity: each metal poſſeſſes powers, which, though increaſed or diminiſhed according to the degree of oxydation, are peculiar to itſelf, and remain in all its preparations.

* * *

ARGENTUM.—SILVER.

Argentum Nitratum.

NITRAS ARGENTI: *olim, Cauſticum Lunare.* NITRAT OF SILVER.

"Take of the Pureſt Silver, extended in plates and cut, four ounces; Diluted Nitrous Acid, eight ounces; Diſtilled Water, four ounces. Diſſolve the ſilver in a phial with a gentle heat, and evaporate the ſolution to dryneſs. Then put the maſs into a large crucible, which is to be put on the fire, which muſt be at firſt gentle, and gradually increaſed until the maſs flow like oil. Then pour it into iron pipes, warmed and rubbed with greaſe. Laſtly, keep it in a glaſs veſſel well ſtopt."

THE ſilver in this proceſs is oxydated and diſſolved by the nitrous acid. By the ſubſequent fuſion, part of the acid is expelled, ſo that this is rather a ſub-nitrat than a nitrat of ſilver. It is a ſtrong cauſtic, and poſſeſſes the advantage of being eaſily applied. It is therefore the one in moſt general uſe.

ANTIMONIUM.—ANTIMONY.

SULPHURETUM ANTIMONII PRÆPARATUM: *olim, Antimonium Præparatum.* PREPARED ANTIMONY.

Antimonium Præparatum.

"Let Sulphuret of Antimony be prepared in the ſame manner as carbonat of lime."

THIS preparation has been already noticed, (page 8.)

OXIDUM ANTIMONII CUM SULPHURE VITRIFICATUM: *olim, Vitrum Antimonii.* VITRIFIED SULPHURATED OXYD OF ANTIMONY.

Antimonium Vitrificatum.

"Strew Sulphuret of Antimony, rubbed to a coarſe powder like ſand, on a ſhallow unglazed earthen veſſel, and apply to it a gentle fire, that the ſulphuret of antimony may be ſlowly heated; at the ſame time ſtirring conſtantly the powder, that it may not run into lumps. White vapours, ſmelling of ſulphur, will ariſe from it. When theſe, while the ſame degree of heat is kept up, ceaſe, increaſe the heat a little, that vapours may again exhale; and proceed in this manner, until the powder, raiſed at length to a red heat, exhales no more vapours. This powder being put into a crucible, is to be melted with a ſtrong fire, until it aſſume the appearance of fuſed glaſs; then pour it upon a heated braſs plate."

In the firſt ſtage of this proceſs, the greater part of the ſulphur of the ſulphuret of antimony is diſſipated, and the antimony is imperfectly oxydated. This oxyd is then vitrified by the more intenſe heat applied. According to Thenard, it contains 16 of oxygen in the 100; but it is farther combined, according to the reſearches of Prouſt, with a portion of ſulphuret of antimony; and, from the experiments of Vauquelin, it appears alſo to contain from 9 to 10 parts in the 100 of ſiliceous earth, derived probably from the crucibles in which it is prepared. It is violent and at the ſame time uncertain in its operation, and is not uſed but in preparing ſome of the other antimonials.

OXIDUM ANTIMONII VITRIFICATUM CUM CERA: *olim*, *Vitrum Antimonii Ceratum*. VITRIFIED OXYD OF ANTIMONY WITH WAX.

"Take of Yellow Wax, one part; Vitrified Sulphurated Oxyd of Antimony, eight parts. To the wax, melted in an iron veſſel, add the oxyd rubbed to powder, and roaſt them with a gentle fire, for a quarter of an hour, ſtirring conſtantly with a ſpatula; then pour out the matter, which, when it is cold, rub to powder."

IT is probable that during this proceſs the oxyd of antimony loſes part of its oxygen, from the carbonaceous matter of the wax attracting it, as it diminiſhes in weight, and becomes much milder in operation. Though once highly recommended in dyſentery, it may be regarded as an obſolete remedy. The doſe in which it was given, was from five to fifteen grains, and its principal operation was that of a cathartic.

OXIDUM ANTIMONII CUM PHOSPHATE CALCIS: *olim*, *Pulvis Antimonialis*. OXYD OF ANTIMONY WITH PHOSPHAT OF LIME.

Pulvis
Antimonialis.

"Take of Sulphuret of Antimony, rubbed to a coarſe powder, Hartſhorn Shavings, of each equal parts. Mix and throw them into a wide iron pot, red hot, and ſtir them conſtantly until they are burnt into a matter of an aſh colour, which remove from the fire, rub to powder, and put into a coated crucible. Lute to this crucible another inverted, in the bottom of which a ſmall hole is drilled; apply the fire, which is to be gradually raiſed to a white heat, and kept at this increaſed heat for two hours. Laſtly, rub the matter, when cold, into a very fine powder."

This has been introduced into the Pharmacopœias, as affording a preparation ſimilar to the celebrated empirical remedy, *James's Powder*. For the proceſs we are indebted to Dr Pearſon. By analyſis he found the genuine powder of James to conſiſt of 43 parts of phoſphat of lime, and 57 of an oxyd of antimony, part of which was vitrified; and by the above formula he was able to prepare a powder ſimilar to it in qualities and chemical compoſition. The theory of the proceſs is ſufficiently obvious. During the firſt ſtage, the animal matter of the bones is decompoſed and burnt out; the ſulphur of the ſulphuret of antimony is expelled, and the metal imperfectly oxydated. In the ſecond, the metal is more completely oxydated, partially vitrified, and perhaps brought into combination with the phoſphat of lime, which is the reſiduum of the bones. From Mr Chenevix's experiments, it appears, that, in this preparation, more of the oxyd of antimony is vitrified than in the genuine James's powder.

Mr Chenevix has likewiſe propoſed a method of obtaining this preparation in the humid way. It conſiſts in diſſolving equal weights of the white powder, precipitated by water, from muriat of antimony, and of pure phoſphat of lime, in as much muriatic acid as may be neceſſary, with the aſſiſtance of a moderate heat, and pouring this ſolution into ammonia diluted with diſtilled water. The ammonia combines with the muriatic acid, and the oxyd of antimony and phoſphat of lime are thrown down intimately mixed. This preparation may be more uniform in compoſition than that obtained by heat, as, in the latter, variations are liable to be introduced, from the different degrees of oxydation, of which antimony is ſuſceptible, and from the volatility of the antimonial oxyds ; but it is uncertain if it be the ſame chemical compound, or if it produce the ſame medicinal effects. It is believed, that, in the powder prepared by the old proceſs, the oxyd of antimony and phoſphat of lime are in a ſtate of combination, while in that of Mr Chenevix, they are only in a ſtate of mixture, and in the former, part of the oxyd is alſo always vitrified ; differences which may give riſe to ſome difference in their powers.

James's powder has been long celebrated as a remedy in febrile affections. It acts as a very general evacuant, occaſioning ſweat, purging, and frequently vomiting ; and, by this general action, appears to arreſt the progreſs of the diſeaſe. Its doſe is five or ſix grains, repeated every ſix hours, till its effects are obtained. It is better adapted to fevers of an inflammatory nature than to thoſe of the typhoid kind.

It has been affirmed, that the preparation obtained by the above proceſs, is not ſo certain nor ſo powerful in its operation, as the powder of James, eight grains of the former being not more than equal to ſix of the latter. The difference, if it exiſt, may be owing to ſome peculiarity in the procefs, by which, perhaps, a difference of oxygenation, or of vitrification of the oxyd may be occaſioned; or, according to the opinion of Dr Fordyce, to the intermixture of a portion of tartarized antimony in the empirical preparation.

SULPHURETUM ANTIMONII PRÆCIPITATUM.

PRECIPITATED SULPHURET OF ANTIMONY.

Sulphur Antimonii Præcipitatum.

"Take of Water of Potaſh, four pounds; Water, three pounds; Prepared Sulphuret of Antimony, two pounds. Boil them in a covered iron pot, on a gentle fire, for three hours, ſtirring frequently with an iron ſpatula, and adding water as it may be neceſſary. Strain the hot liquor through a double linen cloth, and to this ſtrained liquor add as much diluted ſulphuric acid as may be neceſſary to precipitate the ſulphuret, which is to be carefully waſhed with warm water."

FROM the analyſis of this compound by Thenard, it appears to be compoſed of 68.3 of the orange-coloured oxyd of antimony, (which conſiſts of 18 of oxygen, and 82 of antimony), 17.8 of ſulphurated hydrogen, and 11 or 12 of ſulphur. The theory of its formation is ſomewhat intricate. In boiling the ſulphuret of antimony with the potaſh, a ſulphuret of potaſh is formed, and this decompoſing part of the water, hydro-ſulphuret of potaſh is alſo produced; the antimony appears to be at the ſame time oxydated. This oxyd is retained in ſolution by the ſulphuret and hydro-ſulphuret of potaſh. When ſulphuric acid is added, it unites with the potaſh, and the antimonial oxyd, combined with part of the ſulphurated hydrogen and ſulphur, is precipitated. In the foreign Pharmacopœias, an equal part of ſulphur is added to the ſulphuret of antimony, by which the product is increaſed.

When the liquor obtained by boiling the ſolution of potaſh on the ſulphuret of antimony is ſtrained, and allowed to cool, it depoſites a red-coloured powder, which has been known by the name of *Kermes Mineral*, and has been much uſed on the Continent. From the analyſis of it by Thenard, it appears to be a compound of brown oxyd of antimony and ſulphurated hydrogen, with a ſmall portion of ſulphur, the laſt being probably accidental. Trommſdorff attributes the difference between theſe two preparations, to the one *eſ-*

ſentially containing ſulphur combined with the oxyd of antimony and ſulphurated hydrogen; the other not. Thenard aſcribes it rather to a difference of oxygenation, the oxyd in the *kermes* being leſs highly oxydated than in the other.

They agree nearly in their medicinal qualities, which are ſimilar to thoſe of the other antimonials. They have been uſed principally as diaphoretics and ſudorifics, but are always uncertain in their operation. The doſe of the precipitated ſulphuret of antimony, or, as it ſhould rather be named, the Hydro-ſulphurated Oxyd of Antimony, is five or ſix grains.

Crocus Antimonii.

OXIDUM ANTIMONII CUM SULPHURE, PER NITRATEM POTASSÆ: *olim, Crocus Antimonii.* OXYD OF ANTIMONY WITH SULPHUR, BY NITRAT OF POTASH.

"Take of Sulphuret of Antimony, Nitrat of Potaſh, of each equal weights. Triturate them ſeparately, and, having mixed them well together, throw them into a crucible red hot. The deflagration being over, ſeparate the reddiſh matter from the white cruſt, and rub it to a powder, which is to be frequently waſhed with warm water, until it remain inſipid."

During the deflagration, the nitric acid of the nitrat of potaſh is decompoſed ; its oxygen is attracted, partly by the ſulphur, and partly by the antimony. The ſulphurous acid, which is the principal product of the oxygenation of the ſulphur, is in part diſſipated, and in part combined with the potaſh, and forms the white cruſt which is directed to be removed. By the union of another portion of the oxygen with the antimony, a brown or reddiſh oxyd is formed. It appears alſo that part of the ſulphuret of antimony eſcapes decompoſition or oxygenation, and unites with the oxyd. The preparation, therefore, is an imperfect oxyd of antimony with ſulphuret of antimony.

As an antimonial, this preparation is ſo uncertain in its operation, that it is never preſcribed ; it is uſed in making ſome of the other preparations of this metal.

Murias antimonii. Muriat of antimony.

Antimonium Muriatum.

"Take of Oxyd of Antimony with Sulphur by Nitrat of Potaſh, Sulphuric Acid, of each one pound ; Dried Muriat of Soda, two pounds.

Pour the ſulphuric acid into a retort, adding gradually the muriat of ſoda and the oxyd of antimony, previouſly mixed. Then diſtil from warm ſand. Expoſe the diſtilled matter for ſome days to the air, that it may deliqueſce; then pour the liquid part from the impurities."

In this mode of forming muriat of antimony, the muriat of ſoda is decompoſed by the ſulphuric acid combining with the ſoda; the muriatic acid diſengaged, unites with the oxyd of antimony, and the compound is volatilized. It is at firſt of a ſoft conſiſtence, but ſoon attracts a ſufficient portion of humidity to render it fluid. If water be poured on it, it is decompoſed, and a ſub-muriat of antimony is precipitated.

This preparation is unfit for internal uſe; externally it has ſometimes been uſed as a cauſtic. Decompoſed by potaſh, it affords an oxyd which has been uſed in preparing the tartrite of antimony.

TARTRIS ANTIMONII: *olim, Tartarus Emeticus.* TARTRITE OF ANTIMONY.

Antimo-
niumTar
tariſatum

" Take of Oxyd of Antimony with Sulphur by Nitrat of Potaſh, three parts; Super-Tartrite of Potaſh, four parts; Diſtilled Water, thirty-two parts. Boil them in a glaſs veſſel for a quarter of an hour. Strain through paper, and put aſide the ſtrained liquor, that cryſtals may be formed."

The exceſs of tartarous acid in the ſuper-tartrite of potaſh, is capable of combining with a number of the metallic oxyds, and forming ternary compounds. With oxyd of antimony, when not too highly oxydated, it unites with facility, forming a combination of this kind, which conſtitutes the preſent preparation. As the tartarous acid is ſaturated, partly by potaſh, and partly by oxyd of antimony, it is not a pure tartrite of antimony, but a tartrite of antimony and potaſh. According to the analyſis of it by Thenard, it conſiſts of 38 parts of oxyd of antimony, 34 of tartarous acid, 16 of potaſh, and 8 of water.

As this is the moſt important of the antimonial preparations, the proceſſes for obtaining it have been often varied, principally in the ſelection of the oxyd of antimony employed. The object is to obtain an oxyd, not too expenſive in its preparation, and which ſhall combine with facility with the tartarous acid. The oxyd precipitated by potaſh from muriat of antimony, recommended by Bergman, and employed in the proceſs given in the preceding edition of the Edinburgh Pharmacopœia, is liable to the former objection. The oxyd which is at preſent ordered in the proceſſes, both of the London and Edinburgh Pharmacopœias, anſwers ſufficiently well, if it has been properly prepared. As met with in the ſhops, it is, however, almoſt always unfit for this purpoſe; as, from not being prepared with the due proportion of nitrat of potaſh, it is not ſufficiently oxydated. The vitrified oxyd is, perhaps, the moſt unexceptionable; it contains, indeed, a portion of ſiliceous earth, which accompanies the oxyd of antimony in its combination with the tartarous acid, and, when the liquor is conſiderably evaporated, gives to it a gelatinous conſiſtence: but, before this happens, the greater part of the tartrite of antimony and potaſh may be procured by cryſtallization; or, according to Vauquelin's method, the ſolution may be directly evaporated to dryneſs, and, on again diſſolving the ſaline matter in water, the ſilex remains undiſſolved.

Tartrite of antimony and potaſh cryſtallizes in ſmall triedral pyramids, which are effloreſcent.

cent. Its ſolubility has been variouſly ſtated, and appears to vary according to the quantity of antimonial oxyd contained in it, from proper preparation. According to Dr Saunders, one ounce of water at 60° diſſolves 52 grains of the fully ſaturated ſalt, while of that generally met with, it diſſolves from 32 to 35. This affords even a mode of judging of the ſtrength of this preparation. It is very ſuſceptible of decompoſition, ſuffering it not only from alkalies, earths, acids, and a number of neutral ſalts, but even from vegetable infuſions and decoctions, the vegetable matter attracting apparently part of the oxygen of the oxyd. If kept diſſolved in water, it is alſo decompoſed, from the ſpontaneous decompoſition of the tartarous acid.

This preparation is undoubtedly ſuperior to the other antimonials, in the certainty of its operation; and, from its ſolubility, is more manageable with regard to doſe. Its medicinal applications have been already noticed. It is given as an emetic in a doſe of from one to three grains, diſſolved in water; and, in ſmaller doſes, as an expectorant and diaphoretic.

VINUM TARTRITIS ANTIMONII : *olim, Vinum Antimoniale.* WINE OF TARTRITE OF ANTIMONY.

" Take of Tartrite of Antimony, twenty-four grains; White Wine, one pound. Mix, ſo that the tartrite of antimony may be diſſolved."

THIS ſalt, diſſolved in wine, can be preſerved longer without decompoſition than when diſſolved in water; but, even on long keeping, part of the antimonial oxyd is depoſited. It is given as an emetic in the doſe of one ounce; as a diaphoretic, in a much ſmaller doſe.

VINUM ANTIMONII TARTARISATI. *Pharm. Lond.* WINE OF TARTARISED ANTIMONY.

" Take of Tartariſed Antimony, two ſcruples; Boiling Diſtilled Water by meaſure, two ounces; Spaniſh White Wine by meaſure, eight ounces. Diſſolve the tartariſed antimony in the boiling diſtilled water, and add the wine."

IT is to be regretted, that preparations ſo ſimilar in name as theſe two wines, ſhould differ materially in ſtrength; this containing four grains of tartrite of antimony in the ounce, the other only two grains. The doſe of this wine as an emetic, is half an ounce.

VINUM ANTIMONII. ANTIMONIAL WINE. *Pharm. Lond.*

"Take of Vitrified Antimony, in powder, one ounce; Spaniſh White Wine, one pound and a half. Digeſt for twelve days with frequent agitation, and ſtrain through paper."

THIS is the old formula for the preparation of antimonial wine. The tartarous acid, contained in greater or leſs quantity in all wines, acts on the oxyd of antimony, and renders part of it ſoluble. But the quantity muſt be uncertain, and the wine cannot be uniform in ſtrength.

ANTIMONIUM CALCINATUM. CALCINED ANTIMONY. *Pharm. Lond.* WHITE OXYD OF ANTIMONY.

"Take of Antimony (Sulphuret of Antimony) in powder, eight ounces; Nitre in powder, two pounds. Mix them, and throw the mixture gradually into a red hot crucible. Burn the matter remaining after the deflagration, for half an hour, and, when cold, rub it to powder; then waſh it with diſtilled water."

So much nitrat of potaſh is expoſed to heat with the ſulphuret of antimony, in this proceſs, that a quantity of oxygen is afforded by its decompoſition, ſufficient to acidify the ſulphur, and completely oxydate the metal. The perfect oxyd remains after the waſhing, combined with a ſmall quantity of potaſh. The preparation is one of little activity; it was ſuppoſed to be diaphoretic, and was given in a doſe from five to ten grains, as a ſubſtitute for James's powder; but it is now ſeldom employed.

CUPRUM.—COPPER.

AMMONIARETUM CUPRI: *olim, Cuprum Ammoniacum.* AMMONIURET OF COPPER.

"Take of Pure Sulphat of Copper, two parts; Carbonat of Ammonia, three parts. Rub them thoroughly in a glaſs mortar, until all efferveſcence is finiſhed, and they unite uniformly into a violet-coloured maſs, which being wrapt in bibulous paper, is to be dried, firſt on a chalk ſtone, and afterwards with a gentle heat. It is to be kept in a glaſs phial well ſtopt."

The ſulphat of copper is decompoſed by the carbonat of ammonia. One portion of ammonia combines with the ſulphuric acid, another portion of it unites with the oxyd of copper, and the violet-coloured maſs which is formed, is a mixture of the two reſulting compounds: the carbonic acid is diſengaged with effervеſcence. A compound ſomewhat ſimilar is obtained, according to a formula inſerted in ſeveral of the foreign Pharmacopœias, in which a ſaturated ſolution of ſulphat of copper is decompoſed by ammonia, the ammonia being added in exceſs, ſo as to re-diſſolve the oxyd of copper; to this ſolution alkohol is added, by which the ammoniuret of copper is precipitated in ſmall cryſtals.

The preſent preparation has been chiefly employed as a remedy in epilepſy. It is given in a doſe of at firſt half a grain twice a-day, which is gradually and ſlowly increaſed to two or three grains, and continued for ſome time.

SOLUTIO SULPHATIS CUPRI COMPOSITA: *olim, Aqua Styptica.* COMPOUND SOLUTION OF SULPHAT OF COPPER.

" Take of Sulphat of Copper, Sulphat of Alum, of each three ounces; Water, two pounds; Sulphuric Acid, one ounce and a half. Boil the ſulphats in water, that they may be diſſolved; then to the liquor ſtrained through paper add the acid."

THIS is merely a combination of powerful aſtringents. It has been applied topically to check hæmorrhage, and, largely diluted with water, as a waſh in purulent ophthalmia.

AQUA CUPRI AMMONIATI. WATER OF AMMONIATED COPPER. *Pharm. Lond.*

" Take of Sal Ammoniac (Muriat of Ammonia), one drachm; Lime Water, one pound. Allow them to remain in a copper veſſel until the ammonia is ſaturated with copper."

IN this indirect mode of combining oxyd of copper with ammonia, the lime decompoſes the muriat of ammonia, by combining with the muriatic acid; the diſengaged ammonia diſpoſes the copper to oxydation from the atmoſpheric air, and combines with the oxyd, forming a dilute ſolution of ammoniureted oxyd of copper. It has been applied, diluted with an equal part of water, as a gentle eſcharotic, to remove ſpecks from the cornea. A ſimilar preparation had formerly a place in the Edinburgh Pharmacopœia, under the name of AQUA ÆRUGINIS AMMONIATA.

FERRUM.—IRON.

FERRI LIMATURA PURIFICATA. PURIFIED FILINGS OF IRON.

"Having placed a ſieve over the filings, apply a magnet, that they may be drawn through the ſieve upwards."

THIS preparation has been already noticed, (page 4).

Rubigo Ferri.

CARBONAS FERRI: *olim, Ferri Rubigo.* CARBONAT OF IRON.

"Let Purified Filings of Iron be frequently moiſtened with water, that they may fall into a ruſt, which is to be rubbed to a fine powder."

THIS proceſs for preparing a carbonat of iron has been likewiſe already taken notice of (p. 3.).

CARBONAS FERRI PRÆCIPITATUS. PRECIPITATED CARBONAT OF IRON.

"Take of Sulphat of Iron, four ounces; Carbonat of Soda, five ounces; Water, ten pounds. Diſſolve the ſulphat of iron in the water; then add the carbonat of ſoda, previouſly diſſolved in as much water as may be neceſſary, and mix them well. Let the carbonat of iron, which is precipitated, be waſhed with warm water, and afterwards dried."

ON mixing the ſolutions of carbonat of ſoda and ſulphat of iron, the ſoda attracts the ſulphuric acid, the carbonic acid combines with the oxyd of iron; the ſulphat of ſoda remains in ſolution; the carbonat of iron is precipitated. The green ſulphat of iron, which is that employed, contains the metal at its *minimum* of oxydation, and this imperfect oxyd combines with the carbonic acid; but it quickly attracts more oxygen from the atmoſpheric air, and the precipitate of carbonat of iron, in drying, changes its colour, from this cauſe, from a dark green to a reddiſh brown.

Carbonat of iron is a mild, and not inactive preparation. It is given as a tonic in a doſe of five or ten grains. The formula of Dr Griffiths, which has been highly celebrated as a chalybeate, is an extemporaneous preparation of this kind.

FERRI OXIDUM NIGRUM PURIFICATUM: *olim, Ferri Squamæ Purificatæ.* PURIFIED BLACK OXYD OF IRON.

" Let the ſcales of iron, gathered at the anvils of the workmen, be purified, by applying a magnet. The magnet attracts only the ſmaller and purer ſcales, leaving the larger and leſs pure."

THIS, it has been already obſerved (page 5), is uſed only in making ſome of the other preparations of iron.

Ferrum Vitriolatum.

SULPHAS FERRI. SULPHAT OF IRON.

" Take of Purified Filings of Iron, ſix ounces; Sulphuric Acid, eight ounces; Water, two pounds and a half. Mix them; and the effervefcence being over, digeſt for a ſhort time in a ſand-bath; then ſtrain the liquor through paper, and, after due evaporation, put it aſide that cryſtals may form."

THE ſulphuric acid, by a diſpoſing affinity, enables the iron to attract the oxygen of the water with rapidity, and unites with the oxyd thus formed. This oxyd is at the *minimum* of oxydation, and the ſalt which it forms is named the Green Sulphat of Iron, to diſtinguiſh it from the Red Sulphat, in which the metal is more highly oxydated. This green ſulphat is prepared for the various purpoſes to which it is applied in the arts, on a large ſcale, by expoſing the native ſulphuret of iron to air and moiſture; but, by the preſent proceſs, it is obtained in a purer ſtate.

Sulphat of iron is one of the moſt active preparations of the metal. Its medium doſe is from three to five grains.

SULPHAS FERRI EXSICCATUS. DRIED SULPHAT OF IRON.

"Take of Sulphat of Iron, any quantity. Heat it in an unglazed earthen veſſel, on a gentle fire, until it become white and perfectly dry."

THIS

This is merely the ſulphat of iron freed from its water of cryſtallization. It was never medicinally employed, and has a place in the Pharmacopœia only from being uſed in one or two pharmaceutical preparations.

OXIDUM FERRI RUBRUM. RED OXYD OF IRON.

" Let dried Sulphat of Iron be expoſed to a violent heat, until it is converted into a red-coloured matter."

By an intenſe heat, ſulphat of iron is decompoſed; its acid is partly expelled, and in part ſuffers decompoſition. The red oxyd is the reſiduum. It is ſcarcely medicinally employed, but is uſed in ſome pharmaceutical preparations.

Tinctura Ferri Muriati.

TINCTURA MURIATIS FERRI. TINCTURE OF MURIAT OF IRON.

" Take of the Purified Black Oxyd of Iron, in powder, three ounces; Muriatic Acid, about ten ounces, or as much as may be ſufficient to diſſolve the powder. Digeſt with a gentle heat, and, when the powder is diſſolved, add as much alkohol as that there ſhall be of the whole liquor two pounds and a half."

The black oxyd of iron combines with the muriatic acid, and, during the ſolution, acquires more oxygen, partly by abſorption from the atmoſphere, and partly by decompoſition of the water, which is promoted by the heat applied. The muriat of iron, in which this more perfect oxyd is contained, is ſoluble in alkohol. The preſent preparation is ſuch a tincture, diluted with the water of the muriatic acid. When firſt prepared, it contains a portion of muriat of iron, in which the metal is imperfectly oxydated; but this ſoon attracts more oxygen, and hence the colour of the tincture deepens on keeping.

It is a very active preparation, and is given in the diſeaſes in which iron is employed, in a doſe of ten or fifteen drops.

MURIAS AMMONIÆ ET FERRI: *olim, Flores Martiales.* MURIAT OF AMMONIA AND IRON.

Ferrum Ammoniacale.

"Take of Red Oxyd of Iron, waſhed and again dried, Muriat of Ammonia, of each equal weights. Mix them well together, and ſublime."

Oxyd of iron decompoſes muriat of ammonia, by attracting the muriatic acid, and, in the preſent proceſs, this decompoſition takes place. But, from the proportions of the ſubſtances employed, part of the muriat of ammonia eſcapes decompoſition; it is ſublimed by the heat applied, and elevates alongſt with it part of the muriat of iron that had been formed. The proceſs is therefore rather an unſcientific mode of obtaining a muriat of iron: the preparation too has been found uncertain in ſtrength, more or leſs of the muriat of iron being ſublimed, according to the heat applied; and, accordingly, it has now fallen into diſuſe. It was principally employed as a remedy in rickets, in the doſe, to children, of two or three grains.

Tinctura ferri ammoniacalis. *Pharm. Lond.*

"Take of Ammonical Iron, four ounces; Proof Spirit, by meaſure, one pound. Digeſt and ſtrain."

This is an unneceſſary preparation, as it differs little from the Tincture of Muriated Iron.

FERRUM TARTARISATUM. TARTARISED IRON. *Pharm. Lond.*

"Take of Filings of Iron, one pound; Cryſtals of Tartar (Super-Tartrite of Potaſh), powdered, two pounds; Diſtilled Water, one pound. Mix them, and expoſe the mixture to the air in an open glaſs veſſel for eight days; then rub the matter, dried by a ſand-bath, into a very fine powder."

BY expoſure to air and moiſture, the iron is oxydated, and its oxyd combines with the exceſs of acid in the ſuper-tartrite of potaſh, a triple ſalt reſulting, compoſed of potaſh, oxyd of iron, and tartarous acid. It is very ſoluble in water. As a medicine, it is milder in its operation than ſome of the other ſaline preparations of the metal. Its doſe is from five to fifteen grains.

VINUM FERRI. WINE OF IRON. *Pharm. Lond.*

"Take of Filings of Iron, four ounces; Spaniſh White Wine, four pounds. Digeſt with frequent agitation for a month, and ſtrain."

THIS is a ſimilar preparation; the tartarous acid preſent in the wine oxydating and combining with the iron: it muſt always, however, be uncertain in ſtrength. Its uſual doſe is one or two drachms.

HYDRARGYRUS—QUICKSILVER.

Hydrargyrus Purificat.

HYDRARGYRUS PURIFICATUS. PURIFIED QUICKSILVER.

"Take of Quickſilver, four parts; Iron Filings, one part. Rub them together and diſtil from an iron veſſel."

QUICKSILVER is ſometimes adulterated with other metals. To obtain it perfectly pure is the deſign of this proceſs. The addition of the iron filings renders the diſtilled quickſilver more bright and mobile; an effect not perfectly explained, but aſcribed to the iron retaining combined with it any foreign metal, or any portion of carbon that might have been contained in the quickſilver.

Hydrargyrus Acetatus.

ACETIS HYDRARGYRI. ACETITE OF QUICKSILVER.

"Take of Purified Quickſilver, three ounces; Diluted Nitrous Acid, four ounces and a half, or a little more than may be requiſite to diſſolve the quickſilver ; Acetite of Potaſh, three ounces ; Boiling Water, eight pounds. Mix the quickſilver with the diluted nitrous acid ; and towards the end of the effervescence, digeſt, if neceſſary, with a gentle heat, until the quickſilver be entirely diſſolved. Then diſſolve the acetite of potaſh in the boiling water, and immediately on this ſolution, while hot, pour the other, and mix them both by agitation. Then put aſide, that cryſtals may be formed. Theſe being placed in a funnel, waſh them with cold diſtilled water ; and, laſtly, dry them with a very gentle heat.

" In preparing the acetite of quickſilver, it is neceſſary that all the veſſels and the funnel which are employed ſhould be of glaſs."

Acetite of Mercury is, in ſome of the foreign Pharmacopœias, formed by digeſting the red oyyd, or rather ſub-nitrat of mercury, in diſtilled vinegar ; but, in the proceſs adopted by the Edinburgh and London Colleges, it is obtained by the exertion of a double elective attraction. On mixing the ſolutions of nitrat of mercury and acetite of potaſh, the oxyd of mercury attracts the acetous acid, and the potaſh combines with the nitric acid. The acetite of mercury cryſtallizes as the liquor cools. The obſervations of Prouſt ſeem juſt, that by theſe two proceſſes different acetites of mercury are obtained; by the former, one in which the oxyd is at the *maximum* of oxydation, and, by the other, one at the *minimum*. It is this latter only which forms the ſoft flaky ſubſtance that has been uſually employed in medicine. It may be doubted whether the uſe of ſo large a proportion of acid, and the application of heat, ordered in the proceſs of the Pharmacopœia, be proper; the proceſs in the former edition ſeems indeed preferable to that which is now adopted.

Acetite of mercury cryſtallizes in ſmall brilliant flakes. It is ſoluble in hot, and inſoluble in cold water. As an antiſyphilitic remedy, it is very mild in its operation; but its effects are not conſidered as ſufficiently permanent to allow of it being relied on in effecting a radical cure. Its doſe is a grain, night and morning.

MURIAS HYDRARGYRI: *olim, Mercurius Sublimatus Corroſivus.* MURIAT OF MERCURY.

Hydra
gyrus
Muriat

"Take of Purified Quickſilver, two pounds; Sulphuric Acid, two pounds and a half; Muriat of Soda, dried, four pounds. Boil the quickſilver with the ſulphuric acid in a glaſs veſſel placed in a ſand-bath, until the matter become dry. Mix the cold matter in a glaſs veſſel, with the muriat of ſoda; then ſublime it in a glaſs cucurbit with a heat gradually raiſed. Separate the ſublimed matter from the ſcoriæ."

IN the firſt ſtage of this proceſs, the ſulphuric acid oxydates the mercury, and combines with the oxyd; and, by the heat applied, the ſalt thus formed is that which contains the metal in a high ſtate of oxydation. This ſalt, in its dry ſtate, is mixed with muriat of ſoda, and, by the application of heat, a double decompoſition is effected; the ſoda attracts the ſulphuric acid, and the muriatic acid combines with the oxyd of mercury. The muriat of mercury being eaſily volatilized, is ſeparated from the ſulphat of ſoda by ſublimation. The proceſs formerly uſed, was, to mix ſub-nitrat of mercury, muriat of ſoda, and dried ſulphat of iron, and expoſe the mixture to a heat ſufficient to ſublime the muriat of mercury: And there is ſome reaſon to doubt, notwithſtanding the expence of the nitrous acid in this proceſs, whether it is not more economical, or whether it does not more certainly afford the whole mercury in the form of corroſive muriat, than the one now adopted.

According to the analyſis of muriat of mercury by Mr Chenevix, it conſiſts of 82 of oxyd of mercury (this oxyd being compoſed of 85 of mercury and 15 of oxygen), and 18 of muriatic acid; or, its ultimate conſtituents are, quickſilver, 69.7, oxygen, 12.3, and muriatic acid, 18. By ſlow ſublimation, it is obtained cryſtallized in ſlender priſms; by a more haſty ſublimation, in a compact cryſtalline maſs. It is eaſily ſoluble in water, requiring 20 parts at 60° for its ſolution, and 2 parts at 212°. It is likewiſe ſoluble in alkohol. Its taſte is acrid and metallic. It turns to a green ſeveral vegetable colours; is decompoſed by the alkalies and earths, and by a number of compound ſalts, and likewiſe by vegetable infuſions.

It is the moſt powerful of the mercurial preparations.

parations. Its doſe cannot ſafely exceed the fourth of a grain, nor can more than one grain be given in twenty-four hours. As an antiſyphilitic remedy it has long been eſtabliſhed in practice, and it poſſeſſes ſome advantages. It acts ſpeedily, and its action is more general on the ſyſtem, or leſs determined to particular parts; but theſe are more than counterbalanced by the occaſional violence of its operation, and by the circumſtance which ſeems now admitted, that it cannot be ſo much relied on in eſtabliſhing a permanent cure. It is given in the form of ſolution in water or alkohol, the doſe being increaſed from the ſixth to the fourth of a grain, night and morning, and mucilaginous diluents being freely taken, with the occaſional uſe of opium. As the ſolution has a very diſagreeable taſte, it is ſometimes made into pills with crumb of bread. In other diſeaſes beſides lues venerea, it is occaſionally exhibited, particularly in cutaneous affections. Externally, its ſolution is employed as an eſcharotic in chancre and venereal ulcers of the mouth; and a very dilute ſolution of it has been uſed as an injection, to excite inflammation in obſtinate gleet.

Calomelas.

SUB-MURIAS HYDRARGYRI: *olim, Calomelas.*
SUB-MURIAT OF QUICKSILVER.

"Take of Muriat of Quickſilver, rubbed to powder in a glaſs mortar, four ounces; Purified Quickſilver, three ounces. Rub them together in a glaſs mortar, with a little water, that the operator may be guarded againſt the acrid powder which would otherwiſe ariſe, until the quickſilver is extinguiſhed. Put the dried powder into an oblong phial, of which it ſhall fill only one-third, and let it be ſublimed in a ſand-bath. The ſublimation being finiſhed, and the phial broken, the red powder at the bottom and the white one about the neck of it are equally to be rejected; the remaining maſs is to be again ſublimed, and rubbed into a fine powder, which is laſtly to be waſhed with boiling diſtilled water."

IN this proceſs, the directions for performing of which are ſufficiently explicit, an additional quantity of quickſilver is brought into chemical union with the conſtituent principles of muriat of mercury. In *that* compound, the metal is highly oxydated, and the oxyd is combined with

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a conſiderable proportion of muriatic acid. In converting it into the Sub-Muriat of Mercury, as it is named, the portion of metal which is added attracts part of the oxygen of the oxyd, and the whole becomes an oxyd of mercury with a comparatively ſmall proportion of oxygen; and this oxyd requiring leſs muriatic acid for its ſaturation than the one more highly oxydated does, finds a ſufficient quantity in the pre-exiſting muriat. The one is merely imperfect oxyd of mercury combined with muriatic acid; the other perfect oxyd of mercury united with the ſame acid, the latter at the ſame time containing more acid in its compoſition than the former. Mr Chenevix's analyſis has fixed the proportions with accuracy. Thoſe of the Muriat, as it has been named, have been already ſtated; thoſe of the Sub-Muriat are, muriatic acid, 11.5, oxyd of mercury, 88.5, (this oxyd being compoſed of quickſilver, 89.3, and oxygen 16.7.) So that the ultimate conſtituent parts of Sub-Muriat of Mercury, are, quickſilver, 79, oxygen, 9.5, muriatic acid, 11.5.

The names which have been choſen to diſtinguiſh theſe two muriats of mercury, are not the beſt that might have been ſelected. In a chemical point of view, the prefixing the ſyllable *ſub*, to denote the one, is incorrect, ſince the uſe of that ſyllable is reſtricted to thoſe ſalts in which the baſe is the ſame, but where there is a deficiency of acid; and in the muriat to which it is here applied, the baſe is not the ſame, and there is no ſuch deficiency of acid, the metallic oxyd being ſaturated, or combined with as much as it is diſpoſed to unite with. As a medical nomenclature, the adoption of it is ſtill more to be regretted, as the merely prefixing the ſyllable to the ſame name is inſufficient to guard effectually againſt the dangerous miſtake of confounding preparations which differ ſo widely in their powers. The epithets *corroſive* and *mild* have long been uſed to diſcriminate them; they do ſo more clearly, and, as ſyſtematic names, they are preferable, as according with the eſtabliſhed nomenclature of the metallic ſalts, which draws the diſtinctions between the ſalts formed from different oxyds of the ſame metal united with one acid, from ſome quality in which they differ. The one preparation ought to have been named *Murias Hydrargyri Corroſivus*, the other *Murias Hydrargyri Mitis*.

This preparation of mercury differs from the former, in being perfectly inſipid, and inſoluble in water or alkohol. By ſublimation it may be obtained in ſmall ſhort priſms, but it is uſually in the form of a maſs ſomewhat ductile, ſemi-tranſparent and very heavy. It is decompoſed by the alkalies, earths, and various compound ſalts.

Sub-muriat, or mild muriat of mercury, is one of the moſt uſeful preparations of the metal. As an anti-venereal it is given in the doſe of a grain night and morning, its uſual determination to the inteſtines being prevented, if neceſſary, by opium. It is the preparation which is, perhaps, moſt uſually given in the other diſeaſes in which mercury is employed, as in affections of the liver or neighbouring organs, in cutaneous diſeaſes, chronic rheumatiſm, tetanus, hydrophobia, hydrocephalus, and febrile affections eſpecially thoſe of warm climates. It is employed as a cathartic alone, or to promote the operation of other purgatives. Its anthelmintic power is juſtly celebrated; and it is perhaps ſuperior to the other mercurials, in aſſiſting the operation of diuretics in dropſy. From its great ſpecific gravity, it ought always to be given in the form of bolus or pill.

Hydrargyrus Muriatus Mitis.

SUB-MURIAS HYDRARGYRI PRÆCIPITATUS. PRECIPITATED SUB-MURIAT OF MERCURY.

"Take of Diluted Nitrous Acid, Purified Quickſilver, of each eight ounces; Muriat of Soda, four ounces and a half; Boiling Water, eight pounds. Mix the quickſilver with the diluted nitrous acid; and, towards the end of the efferveſcence, digeſt with a gentle heat, ſhaking the veſſel frequently. It is neceſſary, however, that more quickſilver ſhould be mixed with the acid than this can diſſolve, that the ſolution may be obtained fully ſaturated. Diſſolve at the ſame time the muriat of ſoda in the boiling water: pour the other ſolution on this while warm, and mix them quickly together. After the precipitate ſubſides, pour off the ſaline liquor, and waſh the ſub-muriat of mercury, by frequently adding warm water, pouring it off after each time the precipitate ſubſides, until it come off taſteleſs."

Mild Muriat of Mercury is in this proceſs obtained by a double elective attraction. On mixing together the ſolutions of nitrat of mercury and muriat of ſoda, the nitric acid is attracted by the ſoda; and the muriatic acid by the oxyd of mercury. In order that the mild, and not the corroſive muriat ſhould be formed, it is evident that the mercury in the nitrous acid ſhould be in its leaſt oxydated ſtate. In the original proceſs of Scheele, by whom this mode of preparing mild muriat of mercury was propoſed, the nitrous acid was directed to be boiled or digeſted on the mercury, with the view of ſaturating it more fully with the metal. This direction has been retained in the different Pharmacopœias in which the proceſs has been adopted ; and even lately, Mr Chenevix ſeems to incline to the opinion on which it is founded,—that, by adding a large proportion of mercury to nitrous acid, and promoting the ſolution by heat, the combination is obtained in which the metal is imperfectly oxydated. It will be found, however, on experiment, that this is not the caſe. When the ſolution is made ſlowly and in the cold, on adding it to muriat of ſoda, much more mild, and leſs corroſive, muriat of mercury is formed, than when the uſual directions are complied with. We thus alſo avoid the precipitation of ſub-nitrat of mercury, which takes place on mixing the two ſolutions, when heat has been applied in preparing the mercurial ſolution. It is always neceſſary, however, to waſh the precipitate carefully, as a ſmall portion of corroſive muriat is formed, even when the proceſs is moſt properly conducted.

Mild muriat of mercury, prepared in this mode, is preciſely the ſame in its chemical compoſition as when formed by the former proceſs of ſublimation. It has been ſuppoſed, however, that it differs ſomewhat in its operation, and that in particular it is more liable to produce purging. If ſuch a difference ever exiſt, it is probably owing to the preſence of the ſub-nitrat of mercury, which, when the uſual directions are obſerved, may be mixed with the mild muriat. If the latter is pure, its operation muſt be the ſame as that of the muriat prepared by ſublimation, as it differs from it only in being in a much finer powder than what the other can be reduced to, and this has been ſuppoſed to give it ſome ſuperiority.

OXIDUM HYDRARGYRI CINEREUM. ASH-COLOURED OXYD OF QUICKSILVER.

"Take of Purified Quickſilver, four parts; Diluted Nitrous Acid, five parts; Diſtilled Water, fifteen parts; Water of Carbonat of Ammonia, as much as may be ſufficient. Diſſolve the quickſilver in the acid. Add gradually the diſtilled water. Then pour on as much of the water of carbonat of ammonia as may be ſufficient to precipitate the oxyd of quickſilver, which is to be afterwards waſhed with pure water and dried."

IN this proceſs the nitric acid oxydates the mercury, and combines with the oxyd. The action of ammonia on the nitrat of mercury is peculiar: it does not merely decompoſe it by combining with the acid, and ſeparating the oxyd, but it exerts a farther action on the oxyd, partially de-oxydating it, by part of its hydrogen attracting a part of the oxygen. The oxyd precipitated, therefore, is that in which the metal is combined with the leaſt proportion of oxygen.

In order, however, that this may be the nature of the precipitate, it is neceſſary that the ſolution of the mercury in the nitric acid ſhould have been made in the cold, and with a diluted acid. When, from theſe circumſtances not having been attended to, the mercury has been too highly oxydated, ammonia throws down from the ſolution a white precipitate; and the preſent preparation is often met with of a light grey colour, from the intermixture of this precipitate with the dark-coloured oxyd. When properly prepared, it is of a dark blue colour.

Aſh-coloured oxyd of mercury is very ſimilar in its operation to the preparations in which quickſilver is oxydated by trituration. It is given as an anti-venereal in the doſe of one grain night and morning, generally in the form of pill.

Hydrargyrus Nitratus Ruber.

OXIDUM HYDRARGYRI RUBRUM PER ACIDUM NITRICUM: *olim, Mercurius Præcipitatus Ruber.* RED OXYD OF QUICKSILVER BY NITRIC ACID.

"Take of Purified Quickſilver, one pound; Diluted Nitrous Acid, ſixteen ounces. Let the quickſilver be diſſolved. Evaporate the ſolution with a gentle fire to a white dry maſs, which being reduced to powder, is to be put into a glaſs cucurbit, a thick glaſs plate being put over its ſurface. Then a capital being adapted, and the veſſel placed in ſand, apply to it a fire gradually raiſed, until it paſs into very red ſmall ſcales."

THE quickſilver is in this preparation firſt oxydated by the nitrous acid, and then combined with a portion of it. By the increaſe of heat, this nitrat is decompoſed, and the greater part of the acid expelled: it is doubtful, however, if it be ever wholly expelled, ſo as to leave a pure oxyd, the preparation being different in appearance from the red oxyd obtained by heat, and being always much more acrid. It is too much ſo for internal uſe. It is principally uſed externally as an eſcharotic.

SUB-SULPHAS HYDRARGYRI FLAVUS: *olim, Turpethum Minerale.* YELLOW SUB-SULPHAT OF QUICKSILVER.

Hydrargyrus Vitriolatus.

"Take of Purified Quickſilver, four ounces; Sulphuric Acid, ſix ounces. Put them into a glaſs cucurbit, and boil in a ſand-bath to dryneſs. The white matter remaining at the bottom of the veſſel being powdered, is to be thrown into boiling water. It will thus be converted into a yellow powder, which muſt be frequently waſhed with warm water."

The quickſilver is firſt oxydated by the ſulphuric acid, and afterwards combined with it, forming ſuper-ſulphat of mercury. By the continuance of the heat, this is partially decompoſed, and a ſub-ſulphat of mercury remains. On this, boiling water is poured; a portion of ſulphat of mercury ſtill preſent in the ſaline matter is diſſolved; and the yellow powder which remains is an oxyd of mercury, with a ſmall quantity of ſulphuric acid combined with it.

As a medicine, it is too violent in its operation to be adminiſtered internally. Sometimes, however, it has been given as a powerful emetic, in a doſe of five grains, particularly in caſes of ſwelled teſticle. This practice is probably now relinquiſhed. It is a violent errhine, and has been employed as ſuch mixed with any mild vegetable powder.

ULPHURETUM HYDRARGYRI NIGRUM: *olim*, *Æthiops Mineralis.* BLACK SULPHURET OF QUICKSILVER.

Hydrargyrus cum Sulphure.

"Take of Purified Quickſilver, Sublimed Sulphur, of each equal weights. Rub them together in a glaſs mortar with a glaſs peſtle, until the globules of quickſilver entirely diſappear."

BY this trituration a chemical combination appears to be effected between the quickſilver and ſulphur, and perhaps the metal is at the ſame time imperfectly oxydated. It is in the form of a very black powder.

It is the moſt inactive, perhaps, of the mercurial preparations. As an anthelmintic it is ſometimes given in a doſe of five or ten grains, according to the age.

SOME additional preparations of mercury have a place in the London Pharmacopœia, and are uſed in practice.

HYDRARGYRUS SULPHURATUS RUBER. RED SULPHURATED QUICKSILVER.

"Take of Purified Quickſilver, forty ounces; Sulphur, eight ounces. Mix the quickſilver with the melted ſulphur. If the mixture inflame, extinguiſh it by covering the veſſel; then reduce it to powder and ſublime."

IN this preparation it was conceived, that, during the inflammation of the materials, the quickſilver was oxydated, and that therefore the reſulting compound was a combination of ſulphur and oxyd of mercury. The extrication of heat and light, which ariſes from the mutual action of the ingredients, appears however not to be an example of oxygenation, but to be rather of the ſame kind as that which takes place from the combination of different metals with ſulphur; and, according to the analyſis of Prouſt, Cinnabar, as this preparation is named, conſiſts of ſulphur with metallic mercury, in the proportion of 15 of the former to 85 of the latter.

Red ſulphurated quickſilver is uſed medicinally, principally under the form of fumigation, to check the progreſs of venereal ulcers.

HYDRARGYRUS CUM CRETA. QUICKSILVER WITH CHALK.

"Take of Purified Quickſilver, three ounces; Prepared Chalk, five ounces. Rub them together until the globules diſappear."

IN this, as in other caſes of the trituration of mercury, it ſuffers oxydation more or leſs completely; and on the quantity of oxyd formed, muſt depend the activity of the preparation. It is very little employed.

HYDRARGYRUS CALCINATUS. CALCINED QUICKSILVER. *Red Oxyd of Quickſilver.*

"Take of Purified Quickſilver, one pound. Expoſe the quickſilver in a glaſs cucurbit having a flat bottom, in a ſand-bath to a heat of 600°, until it concretes into a red powder."

THIS operation of oxydating quickſilver, by atmoſpheric air, with the aſſiſtance of heat, is troubleſome and expenſive, owing to the quickſilver being volatilized at nearly the ſame temperature as that at which it is capable of attracting oxygen. The red oxyd is in the form of ſcales; it is decompoſed by the heat of ignition, giving out very pure oxygen gas. It contains ſeven parts of oxygen in the 100.

The high price of this preparation prevents it from being employed in common practice. It has been regarded as one of the moſt active of the mercurials, and, at the ſame time, one of the moſt permanent in its effects, and has been recommended in confirmed *lues*, where other preparations have failed. Its doſe is half a grain or a grain.

CALX HYDRARGYRI ALBA. WHITE CALX OF QUICKSILVER.

"Take of Muriated Quickſilver, Sal-Ammoniac (Muriat of Ammonia), Water of Prepared Kali, of each half a pound. Diſſolve firſt the ſal-ammoniac, and then the muriated quickſilver, in diſtilled water, to which add the water of prepared kali. Waſh the powder until it is taſteleſs."

THE theory of this proceſs is ſomewhat complicated. The potaſh decompoſes the muriat of ammonia, by combining with the muriatic acid, and the diſengaged ammonia decompoſes the muriat of mercury. Hence, if to a ſolution of corroſive muriat of mercury, ammonia be added, the ſame preparation is obtained as by this proceſs. The action of the ammonia in decompoſing the corroſive muriat of mercury is alſo ſomewhat peculiar. It does not merely attract the muriatic acid, and ſeparate the pure mercurial oxyd, but this oxyd retains combined with it a portion both of the ammonia and acid. It is therefore a triple compound, conſiſting, according to Fourcroy's analyſis of it by decompoſing it by heat, of 81 parts of oxyd of mercury, 16 of muriatic acid, and 3 of ammonia. This preparation, Murias Hydrargyri et Ammoniæ, formerly known by the name of *White Precipitate of Mercury*, is uſed only externally in the form of ointment, as an application in ſome cutaneous affections.

PLUMBUM.—LEAD.

ACETIS PLUMBI: *olim, Saccharum Saturni.* ACETITE OF LEAD. Ceruſſa Acetata

"Take of White Oxyd of Lead, any quantity. Put it into a cucurbit, and pour upon it twice its weight of Diſtilled Acetous Acid. Let the mixture ſtand on warm ſand until the acid become ſweet; then pour it off, and add a freſh quantity as often as may be neceſſary, until it ceaſe to acquire ſweetneſs. Then evaporate the whole liquor, freed from impurities, in a glaſs veſſel, to the conſiſtence of thin honey, and put it aſide in a cool place, that cryſtals may concrete, which are to be dried in the ſhade. Evaporate the remaining liquor, that there may be a new formation of cryſtals, and repeat this evaporation until no more are formed."

The oxyd of lead is in this preparation combined with acetous acid; the ſalt formed concretes in acicular cryſtals. The proceſs is generally carried on on a large ſcale, to furniſh it for various purpoſes in the arts.

The medicinal uſes of acetite of lead have been already noticed. It is principally employed externally as an aſtringent,—as a collyrium in ophthalmia; an injection in gonorrhœa; and a waſh in ſuperficial inflammation.

AQUA LITHARGYRI ACETATI. WATER OF ACETATED LITHARGE. *Pharm. Lond.*

" Take of Litharge, two pounds and four ounces; Diſtilled Vinegar, one gallon. Mix them and boil to ſix pounds, ſtirring conſtantly; then put aſide the liquor. After the impurities have ſubſided, ſtrain it."

THIS preparation has been long in uſe under the name of *Goulard's Extract of Lead.* It is merely a ſolution of acetite of lead in water with an exceſs of acid, and muſt be always variable in ſtrength. It is applied to the ſame purpoſes as the acetite of lead.

ZINCUM.—ZINC.

OXIDUM ZINCI. OXYD OF ZINC.

" Let a large crucible be placed in a furnace filled with burning fuel, in ſuch a manner that it ſhall be ſomewhat inclined to its mouth; and, when the bottom of the crucible is at a moderate red heat, throw in pieces of Zinc, about the weight, each of them, of one drachm. The zinc ſoon inflames, and is converted into white flocculi, which are to be removed, from time to time, from the ſurface of the metal, with an iron ſpatula, that the combuſtion may proceed more perfectly; and, when the inflammation ceaſes, remove the oxyd of zinc from the crucible. Another piece of zinc being thrown in, the operation is to be renewed and repeated as often as may be neceſſary. Laſtly, let the oxyd of zinc be prepared in the ſame manner as carbonat of lime."

Zinc is the moſt inflammable of the metals. At the temperature of ignition, it attracts the oxygen of the atmoſpheric air, and burns vividly. The product is a white oxyd, inſipid, inſoluble, and infuſible. In medicine it is employed principally as an antiſpaſmodic in epilepſy and chorea. Its doſe is from two to five grains twice a-day, and gradually increaſed.

Sulphas zinci: *olim, Vitriolum Album.* Sulphat of zinc.

" Take of Zinc, cut into ſmall pieces, three ounces; Sulphuric Acid, five ounces; Water, twenty ounces. Mix them, and the efferveſcence

cence being finiſhed, digeſt for ſome time on warm ſand. Then ſtrain the liquor through paper; and, after due exhalation, put it aſide, that cryſtals may be formed."

The ſulphuric acid, by a diſpoſing affinity, enables the zinc to oxydate itſelf by decompoſing the water, and then combines with this oxyd. The ſalt is obtained in acicular cryſtals. The proceſs, however, is ſcarcely ever performed in the ſhops, the ſulphat of zinc being prepared on a large ſcale, from certain varieties of the native ſulphuret of the metal. As the cryſtallization of it is difficult, it is always in the form of hard white maſſes. This ſalt is ordered to be purified, in the London Pharmacopœia, by diſſolving it in water, adding a ſmall portion of ſulphuric acid, and cryſtallizing.

Sulphat of zinc is uſed principally as an aſtringent, in the form of ſolution,—as an injection in gonorrhœa, and a collyrium in ophthalmia.

SOLUTIO SULPHATIS ZINCI. SOLUTION OF SULPHAT OF ZINC.

" Take of Sulphat of Zinc, ſixteen grains; Water, eight ounces; Diluted Sulphuric Acid, ſixteen drops. Diſſolve the ſulphat of zinc in water; then the acid being added, ſtrain through paper."

This ſolution is principally uſed as a collyrium in ophthalmia.

AQUA ZINCI VITRIOLATI CUM CAMPHORA. WATER OF VITRIOLATED ZINC WITH CAMPHOR. *Pharm. Lond.*

"Take of Vitriolated Zinc, half an ounce; Camphorated Spirit, half an ounce by meaſure; Boiling Water, by meaſure, two pounds. Mix them, and ſtrain through paper."

This alſo is uſed as a local application in ophthalmia. It requires, in general, to be diluted with water.

SOLUTIO ACETITIS ZINCI. SOLUTION OF ACETITE OF ZINC.

"Take of Sulphat of Zinc, one drachm; Diſtilled Water, ten ounces. Diſſolve it. Take alſo of Acetite of Lead, four ſcruples; Diſtilled Water, ten ounces. Diſſolve it. Mix the ſolutions. Let the liquor remain at reſt a little; then ſtrain it."

The ſulphuric acid of the ſulphat of zinc is attracted by the oxyd of lead, the acetous acid of the acetite of lead by the oxyd of zinc: the ſulphat of lead being inſoluble, is precipitated; the acetite of zinc remains in ſolution. This ſolution is uſed as an injection in gonorrhœa; it is conſidered as more aſtringent than the acetite of lead, and leſs irritating than the ſulphat of zinc.

CHAP. XXI.

PULVERES.—POWDERS.

THIS is the ſimpleſt form of compoſition of medicines, the different articles being merely reduced to powder, and mixed together. It is adapted to the exhibition of ſuch remedies as are not ungrateful, and ſuch as are not liable to loſe their virtues by keeping. The powder, when it is to be taken, is mixed with any convenient vehicle.

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Pulv. Aromatic. PULVIS AROMATICUS. AROMATIC POWDER.

" Take of Bark of Cinnamon, Smaller Cardamom Seeds, Ginger Root, of each equal parts. Rub them into a very fine powder, which is to be kept in a glaſs phial well ſtopt." In the London Pharmacopœia the proportion of cinnamon is larger, and one part of long pepper is likewiſe added.

This combination of aromatics is deſigned merely to add to other compoſitions, to communicate fragrance and pungency.

PULVIS ASARI EUROPÆI COMPOSITUS. COMPOUND POWDER OF ASARABACCA.

Pulv. Aſari Compoſ.

"Take of the Leaves of Aſarabacca, three parts; the Leaves of Marjoram, Flowers of Lavender, of each one part. Rub them together to a powder."

This is uſed as a mild errhine, and, when ſnuffed in the quantity of a few grains, occaſions ſneezing and a diſcharge of mucus.

PULVIS CARBONATIS CALCIS COMPOSITUS: *olim, Pulvis Cretaceus.*

"Take of Prepared Carbonat of Lime, four ounces; Bark of Cinnamon, one drachm and a half; Nutmeg, half a drachm. Rub them together to powder."

PULVIS CRETÆ COMPOSITUS. COMPOUND POWDER OF CHALK. *Pharm. Lond.*

"Take of Prepared Chalk, half a pound; Bark of Cinnamon, four ounces; Tormentil, Gum-Arabic, of each three ounces; Long Pepper, half an ounce. Reduce them ſeparately to powder, and mix them."

THESE powders are deſigned as antacids, and are uſed principally in diarrhœa. The addition of the tormentil in the powder of the London Pharmacopœia muſt render it more aſtringent than the other. The doſe of either is from a ſcruple to a drachm.

PULVIS CRETÆ COMPOSITUS CUM OPIO. COMPOUND POWDER OF CHALK WITH OPIUM. *Pharm. Lond.*

" Take of Compound Powder of Chalk, eight ounces; Hard Purified Opium, rubbed to powder, one drachm and a half. Mix them."

THE addition of opium to aſtringents and antacids when given in diarrhœa, is a common practice, and this formula affords a convenient compoſition of this kind. Its doſe is one ſcruple, or half a drachm. Two ſcruples contain very nearly one grain of opium.

PULVIS CHELARUM CANCRI COMPOSITUS. COMPOUND POWDER OF CRABS CLAWS. *Pharm. Lond.*

" Take of Prepared Crabs Claws, one pound;

Prepared

epared Chalk, Prepared Red Coral, of each ree ounces. Mix them."

THESE different articles being merely carbo-ts of lime, more or leſs pure, the mixing of em together muſt be entirely ſuperfluous.

LVIS JALAPÆ COMPOSITUS. COMPOUND POWDER OF JALAP.

" Take of the Powder of the Root of Jalap, e part; Super-Tartrite of Potaſh, two parts. ıb them together into a very fine powder."

BY this addition of the acidulous tartrite of aſh to jalap, the operation of the latter is ppoſed to be rendered leſs irritating and more rigerant. It is an excellent cathartic, ope-ing freely, in a doſe of a drachm and a half.

LVIS IPECACUANHÆ ET OPII: *olim, Pulvis Doveri.* POWDER OF IPECACUANHA AND OPIUM.

Pulvis Ipecacuanhæ Comp.

' Take of the Powder of the Root of Ipeca-nha, Opium, of each one part; Sulphat of aſh, eight parts. Rub them together into a powder."

N this compoſition we have an example of power which one medicine has of modifying the action of another, the ipecacuan renderin the operation of the opium, as a ſudorific, muc more certain than it otherwiſe would be, an appearing alſo to diminiſh its narcotic effect This powder is the moſt certain ſudorific w poſſeſs, and as ſuch is eſtabliſhed in practice The medium doſe is fifteen grains; the operation of which is to be aſſiſted by the ſweatin regimen; and frequently it is neceſſary to giv additional ſmaller doſes at intervals, to produc ſweat. Its principal uſe is in rheumatiſm.

PULVIS OPIATUS. OPIATE POWDER.

"Take of Opium, one part; Prepared Carbonat of Lime, nine parts. Rub them togethe to a fine powder."

PULVIS OPIATUS. OPIATE POWDER. *Pharm. Lond*

"Take of hard Purified Opium, rubbed t powder, one drachm; Prepared Burnt Hartſhorn nine drachms. Mix them."

IN theſe powders the opium is merely divided by the ſubſtance mixed with it. Ten grain contain one grain of opium.

PULVIS SCAMMONII COMPOSITUS. COMPOUND POWDER OF SCAMMONY.

"Take of Scammony, Super-Tartrite of Potaſh, of each equal parts. Rub them together into a very fine powder."

IN this powder the operation of the ſcammony is ſuppoſed to be rendered milder as a purgative, by the ſuper-tartrite of potaſh. It is alſo preferred to the ſcammony alone, as a hydragogue cathartic. Its doſe is from ten to twenty grains.

PULVIS SCAMMONII COMPOSITUS. COMPOUND POWDER OF SCAMMONY. *Pharm. Lond.*

"Take of Scammony, Extract of Jalap, of each two ounces; Ginger, half an ounce. Rub them ſeparately to powder, and mix them."

THIS compoſition, though under the ſame name as the preceding, is of a very different nature; the ſtimulating operation of the ſcammony not being corrected, but rather increaſed by the extract of jalap, and the ginger. It is a ſtrong cathartic. Its medium doſe is ten grains.

PULVIS SCAMMONII COMPOSITUS CUM ALOE. COMPOUND POWDER OF SCAMMONY WITH ALOES. *Pharm. Lond.*

" Take of Scammony, ſix drachms ; Extract of Jalap, Socotorine Aloes, of each one ounce and a half ; Ginger, half an ounce. Rub them ſeparately to powder, and mix them."

THE addition of the aloes, in this formula, cannot alter very materially the operation of the other ingredients. As a ſtimulating cathartic, it may be given in a doſe from ten to fifteen grains.

PULVIS SCAMMONII CUM CALOMELANE. POWDER OF SCAMMONY WITH CALOMEL. *Pharm. Lond.*

" Take of Scammony, half an ounce ; Calomel, Refined Sugar, of each two drachms. Rub them ſeparately to powder, and mix them."

THIS combination is uſed, both as a cathartic and anthelmintic. Its doſe is from ten grains to one ſcruple.

PULVIS SULPHATIS ALUMINÆ COMPOSITUS: *olim, Pulvis Stypticus.* COMPOUND POWDER OF SULPHAT OF ARGIL.

"Take of Sulphat of Argil, four parts; Kino, one part. Rub them into a fine powder."

THIS has been ſometimes uſed internally in menorrhagia, in repeated doſes of ten or fifteen grains, and externally as a ſtyptic application to bleeding wounds.

◆ ◆ ◆

PULVIS ALOES CUM CANELLA. POWDER OF ALOES WITH CANELLA. *Pharm. Lond.*

"Take of Socotorine Aloes, one pound; White Canella, three ounces. Rub them ſeparately to powder; then mix them."

THE canella covers the unpleaſant flavour of the aloes; and this combination is ſometimes uſed as a warm ſtimulating cathartic. It is generally made into a tincture, by infuſing it in ſpirit.

PULVIS

PULVIS ALOES CUM GUIACO. POWDER OF ALOES WITH GUAIAC. *Pharm. Lond.*

"Take of Socotorine Aloes, one ounce and a half; Guaiac Gum-Reſin, one ounce; Aromatic Powder, half an ounce. Rub the aloes and guaiac ſeparately into powder; then mix them with the aromatic powder."

THIS combination of aloes with guaiac is ſeldom uſed. As a ſtimulating aperient, it may be given in a doſe of fifteen or twenty grains.

PULVIS ALOES CUM FERRO. POWDER OF ALOES WITH IRON. *Pharm. Lond.*

"Take of Socotorine Aloes, one ounce and a half; Myrrh, two ounces; Dried Extract of Gentian, Sulphat of Iron, of each one ounce. Rub them ſeparately to powder, and mix them."

THIS combination affords a remedy of conſiderable power in amenorrhœa, though the form of powder is not the moſt proper under which it might be exhibited. Its doſe is from ten to fifteen grains at bed-time.

PULVIS CERUSSÆ COMPOSITUS. COMPOUND POWDER OF CERUSE. *Pharm. Lond.*

"Take of Ceruſe, five ounces; Sarcocolla, one ounce and a half; Tragacanth, half an ounce. Rub them together into a powder."

THIS is uſed as an external application to ſuperficial inflammation, diffuſed in water, and ſometimes as a collyrium, or an injection in gonorrhœa.

PULVIS CONTRAYERVÆ COMPOSITUS. COMPOUND POWDER OF CONTRAYERVA. *Pharm. Lond.*

"Take of Contrayerva, rubbed to powder, five ounces; Compound Powder of Crabs Claws, one pound and a half."

THERE ſeems little neceſſity for combining contrayerva with carbonat of lime, which can add nothing to its virtues. The doſe of the powder may be half a drachm, or two ſcruples.

PULVIS MYRRHÆ COMPOSITUS. COMPOUND POWDER OF MYRRH. *Pharm. Lond.*

"Take of Myrrh, Dried Savin, Dried Rue, Ruſſian Caſtor, of each one ounce. Rub them together to a powder."

This is a combination of ſome of the more powerful emmenagogues. It may be given in amenorrhœa in the doſe of one ſcruple, or half a drachm.

Pulvis sennæ compositus. Compound powder of senna. *Pharm. Lond.*

"Take of Senna, Cryſtals of Tartar, of each two ounces; Scammony, half an ounce; Ginger, two drachms. Rub the ſcammony ſeparately, the others together, into a powder, and mix them."

This may be employed as a purgative, in a doſe of from half a drachm to a drachm.

Pulvis tragacanthæ compositus. Compound powder of tragacanth. *Pharm. Lond.*

"Take of Tragacanth, rubbed to powder, Gum-Arabic, Starch, of each one ounce and a half; Refined Sugar, three ounces. Rub them together into powder."

This combination of mucilaginous ſubſtances may be employed for the general purpoſes of demulcents, in the doſe of a drachm, or more frequently repeated.

CHAP. XXII.

ELECTUARIA.—ELECTUARIES.

ELECTUARIES are compoſitions of the conſiſtence nearly of honey, and are generally made by adding to any powder a ſufficient proportion of ſyrup or mucilage. It is a form adapted to the exhibition of ſuch medicines as are not ungrateful in taſte or flavour. The ingredients are ſo proportioned, that the doſe ſhall not be leſs than a tea-ſpoonful, and not more than twice or thrice that quantity, at a time.

* * *

ELECTUARIUM AROMATICUM. AROMATIC ELECTUARY.

Confect
Aromat

"Take of Aromatic Powder, one part; Syrup of Orange Peel, two parts. Mix, beating them well together, ſo as to form an electuary."

This is a grateful aromatic preparation, frequently combined with other medicines, or made the baſis of cordial mixtures.

Elect. Caſſiæ. Electuarium cassiæ fistulæ. Electuary of purging cassia.

"Take of the Pulp of Caſſia in pods, four parts; Pulp of Tamarind, Manna, of each one part; Syrup of Pale Roſe, four parts. Diſſolve the manna beat in a mortar, with a gentle heat, in the ſyrup; then add the pulps, and, by a continued heat, reduce the mixture to a proper conſiſtence."

This electuary is ſcarcely ever uſed. It is a mild laxative in the doſe of an ounce.

Elect. Sennæ. Electuarium cassiæ sennæ: *olim, Electuarium Lenitivum.* Electuary of senna.

"Take of the Leaves of Senna, eight ounces; Coriander Seeds, four ounces; Liquorice Root, three ounces; Figs, one pound; Pulp of Tamarind, Pulp of Caſſia, Pulp of Prunes, of each half a pound; Refined Sugar, two pounds and a half. Rub the ſenna with the coriander ſeeds, and ſeparate by paſſing through a ſieve ten ounces of the mixed powder. Boil the reſiduum with the figs and the liquorice, in four pounds of water to one half; then expreſs and ſtrain. Reduce the ſtrained liquor, by evaporation, to about one pound and a half. Afterwards add the ſugar, ſo as to make a ſyrup. Add this ſyrup gradually to the pulps; and, laſtly, mix in the powder."

This electuary is in very common uſe as a mild and pleaſant purgative. Its doſe is ſix drachms, or an ounce.

ELECTUARIUM CATECHU: *olim, Confectio Japonica.* ELECTUARY OF CATECHU.

"Take of Extract of Catechu, four ounces; Kino, three ounces; Bark of Cinnamon, Nutmeg, of each one ounce; Opium, diffuſed in a ſufficient quantity of Spaniſh White Wine, one drachm and a half; Syrup of Red Roſe, boiled to the conſiſtence of honey, two pounds and a quarter. Reduce the ſolid ingredients to powder, and, mixing with them the opium and ſyrup, form an electuary."

This electuary affords a combination of the more powerful aſtringents, rendered grateful by aromatics, and having its efficacy, as a remedy in diarrhœa, increaſed by the opium. It is the baſis of the common extemporaneous aſtringent mixture. One grain of opium is contained in rather more than three drachms.

Confectio Opiata.

Electuarium opiatum: *olim, Electuarium Thebaicum.* Opiate electuary.

"Take of Aromatic Powder, ſix ounces; Virginian Snake-root, rubbed to a fine powder, three ounces; Opium, diffuſed in a ſufficient quantity of Spaniſh White Wine, half an ounce; Syrup of Ginger, one pound. Mix, ſo as to form an electuary."

This has kept its place in the Pharmacopœias as a ſubſtitute for the Mithridate and Theriaca Andromachi; officinal preparations once highly celebrated, but now diſcarded. Each drachm, prepared according to the formula in the Edinburgh Pharmacopœia, contains a grain and a half of opium; and rather more in that prepared by the preſcription of the London College.

ELECTUARIUM SCAMMONII. ELECTUARY OF SCAMMONY. *Pharm. Lond.*

" Take of Scammony, rubbed to powder, one ounce and a half; Cloves, Ginger, of each ſix drachms; Oil of Caraway, half a drachm; Syrup of Roſes, as much as may be ſufficient. Mix the aromatics, rubbed together into a powder, with the ſyrup; then add the ſcammony, and, laſtly, the oil of caraway."

THIS is a ſtimulating cathartic; its medium doſe is one drachm.

CHAP. XXIII.

PILULÆ.—PILLS.

PILLS are formed from a maſs ſufficiently ſtiff and adheſive to preſerve the round form which is given to them; this due conſiſtence being obtained by adding to powders a ſufficient quantity of ſyrup, mucilage, or conſerve. It is a form adapted to the exhibition of ſuch medicines as are nauſeous in taſte or flavour, and ſuch as operate in a ſmall doſe. A pill ought not to exceed five grains in weight, or twelve may be formed from a drachm of the maſs.

* * *

PILULÆ ALOETICÆ. ALOETIC PILLS.

"Take of Socotorine Aloes, in powder, Soap, of each equal parts. Beat them with Simple

Syrup, ſo as to make a maſs fit for forming pills."

PILULÆ ALOES COMPOSITÆ. COMPOUND ALOES PILLS. *Pharm. Lond.*

"Take of Socotorine Aloes, in powder, one ounce; Extract of Gentian, half an ounce; Oil of Caraway, two ſcruples; Syrup of Ginger, as much as neceſſary. Beat them together."

UNDER either of theſe ſimple forms aloes is very commonly exhibited as a cathartic. Two pills are a medium doſe.

PILULÆ ALOES CUM ASSA FOETIDA. PILLS OF ALOES WITH ASSAFOETIDA.

"Take of Socotorine Aloes, Aſſafœtida, Soap, of each equal parts. Beat them into a maſs with mucilage of gum Arabic."

THESE pills have been given in dyſpepſia and amenorrhœa, two or three being taken at bed-time occaſionally.

PILULÆ ALOES CUM COLOCYNTHIDE. PILLS OF ALOES WITH COLOCYNTH.

"Take of Socotorine Aloes, Scammony, of

each eight parts; Colocynth, four parts; Sulphat of Potaſh with Sulphur, Oil of Cloves, of each one part. Let the aloes and ſcammony be reduced, with the ſalt, to powder; then let the colocynth, rubbed into a fine powder, and the oil, be added. Laſtly, beat them with mucilage of gum Arabic into a maſs."

This is a more powerful cathartic than the ſimple aloetic pill, and is uſed in conſtipation, or to obviate habitual coſtiveneſs. Two pills are a common doſe.

Pilulæ Aloes cum Myrrha.

PILULÆ ALOES CUM MYRRHA. PILLS OF ALOES WITH MYRRH.

" Take of Socotorine Aloes, four parts; Myrrh, two parts; Saffron, one part. Beat them into a maſs with Simple Syrup."

This compoſition has long been in uſe in medical practice as a ſtimulating aperient. Two or three pills are taken at bed-time.

PILULÆ ASSÆ FOETIDÆ COMPOSITÆ. COMPOUND ASSAFOETIDA PILLS.

" Take of Aſſafœtida, Galbanum, Myrrh, of each eight parts; Rectified Oil of Amber, one part. Beat them into a maſs with Simple Syrup."

THESE pills are uſed in hyſteria and amenorrhœa, two or three of them being taken at bed-time.

PILULÆ GALBANI COMPOSITÆ. COMPOUND PILLS OF GALBANUM. *Pharm. Lond.*

" Take of Galbanum, Opoponax, Myrrh, Sagapenum, of each one ounce; Aſſafœtida, half an ounce; Syrup of Saffron, as much as may be ſufficient. Beat them together."

THESE pills are ſimilar to the preceding; are uſed in the ſame caſes, and in the ſame doſe.

PILULÆ AMMONIARETI CUPRI. PILLS OF AMMONIURET OF COPPER.

" Take of Ammoniuret of Copper, ſixteen grains; Crumb of Bread, four ſcruples; Water of Carbonat of Ammonia, as much as may be ſufficient. Beat them into a maſs, which divide into thirty-two equal pills."

IT is under this form that ammoniuret of copper is given in epilepſy and the other ſpaſmodic diſeaſes in which it has been employed. Half a grain of it is contained in each pill. One pill is given at firſt, night and morning, and the doſe is gradually increaſed.

Pilulæ Hydrargyri.

PILULÆ HYDRARGYRI. MERCURIAL PILL.

"Take of Purified Quickſilver, Conſerve of Red Roſe, of each one ounce; Starch, two ounces. Rub the quickſilver with the conſerve, in a glaſs mortar, until the globules entirely diſappear, adding, as there may be occaſion, a little mucilage of gum Arabic; then add the ſtarch, and beat, with a little water, into a maſs, which is to be immediately divided into four hundred and eighty pills."

DURING the trituration of the quickſilver with the conſerve, it is not merely mechanically divided, but oxydated by the atmoſpheric air, and the efficacy of the pill depends on the grey oxyd formed: hence much depends on the proper trituration. It is the preparation of mercury that is moſt generally employed for internal uſe; and, while it is much milder in its operation than ſome others, it is perhaps capable of anſwering every purpoſe which the remedy can ſerve. The common doſe, given with the view of inducing the uſual mercurial action, is two pills at bed-time and one in the morning, which, in particular caſes and habits, requires to be increaſed. Four or ſix pills given at once generally excite purging.

PILULÆ OPIATÆ: *olim, Pilulæ Thebaicæ.* OPIATE PILLS.

Pilulæ Opii.

“Take of Opium, one part; Extract of Liquorice, ſeven parts; Jamaica Pepper, two parts. Mix the opium and the extract ſeparately, ſoftened with diluted alkohol, and beat them into a pulp; then add the Jamaica pepper rubbed to powder, and, beating them well, reduce them to a maſs.”

THIS affords a form under which the exhibition of opium may be concealed from the patient. Two pills contain one grain of opium. In the formula of the London College, the aromatic is omitted, and the proportion of opium increaſed; ſo that each pill contains one grain.

PILULÆ RHEI COMPOSITÆ. COMPOUND PILLS OF RHUBARB.

“Take of the Root of Rhubarb, one ounce;

Socotorine Aloes, ſix drachms; Myrrh, half an ounce; Oil of Peppermint, half a drachm. Beat them into a maſs with ſyrup of orange peel."

THIS is a moderate laxative much employed, eſpecially in dyſpeptic affections to obviate coſtiveneſs, and ſtimulate gently the ſtomach and inteſtines. Two pills are taken at bed-time.

Pilulæ Scillæ.

PILULÆ SCILLITICÆ. SQUILL PILLS.

" Take of the dried Root of Squill, rubbed to a fine powder, one ſcruple; Gum-Ammoniac, Smaller Cardamom Seeds, in powder, Extract of Liquorice, of each one drachm. Beat them with Simple Syrup into a maſs."

UNDER this form ſquill is often given as an expectorant in aſthma and chronic catarrh. Two pills are taken twice a-day.

CHAP. XXIV.

TROCHISCI.—TROCHES.

TROCHES, or Lozenges, conſiſt of powders brought to a ſolid form by the addition of mucilage. When moiſt, they form a ſoft paſte, in which ſtate they are cut into ſmall ſquare or round pieces, and theſe are hardened by drying. It is a form adapted principally to ſuch medicines as are deſigned to diſſolve ſlowly in the mouth; and hence they are always rendered pleaſant by the addition of a large proportion of ſugar. They are ſeldom active remedies.

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TROCHISCI CARBONATIS CALCIS. TROCHES OF CARBONAT OF LIME.

Trochiſci Cretæ.

" Take of Prepared Carbonat of Lime, four ounces; Gum Arabic, one ounce; Nutmeg, one drachm; Refined Sugar, ſix ounces. Rub theſe to powder, and make it into a maſs with water, fit for forming troches."

This is a pleaſant form under which carbonat of lime may be given as an antacid. The London College, in their formula, order Cinnamon inſtead of Nutmeg.

Trochiſ. Gly-cyrrhiz.

TROCHISCI GLYCYRRHIZÆ. LIQUORICE TROCHES.

"Take of Extract of Liquorice, Gum-Arabic, of each one part; Refined Sugar, two parts. Let them be diſſolved in warm water, and ſtrained. Then evaporate the ſolution, with a gentle heat, into a maſs, which form into troches."

These, from their demulcent quality, may be uſed to allay coughing, in catarrh; but the ſimple Extract of Liquorice is equally effectual, and they are ſcarcely ever uſed.

TROCHISCI GLYCYRRHIZÆ CUM OPIO. LIQUORICE TROCHES WITH OPIUM.

"Take of Opium, two drachms; Tincture of Tolu Balſam, half an ounce; Simple Syrup, eight ounces; Extract of Liquorice, ſoftened with Warm Water, Gum Arabic, in powder, of each five ounces. Firſt, rub the opium with the tincture; then add gradually the ſyrup and the extract; afterwards ſprinkle in the powder of gum Arabic; and, laſtly, dry the maſs, that it may be formed into troches, each weighing ten grains."

These troches are very effectual in relieving the tickling cough frequently attending catarrh. The opium is the active ingredient; the others cover its taſte and flavour, and render the compoſition pleaſant, adding at the ſame time a demulcent quality. One drachm, or ſix troches, contain one grain of opium; and from ſix to twelve may be taken in twenty-four hours.

TROCHISCI GUMMOSI. GUM TROCHES.

"Take of Gum Arabic, four parts; Starch, one part; Refined Sugar, twelve parts. Theſe being powdered, are to be formed into a maſs, with roſe water, fit for forming troches."

This compoſition is deſigned as a demulcent, but is not in uſe; gum Arabic, when pure, anſwering the ſame purpoſe equally well.

TROCHISCI

Troch. Nitri.

TROCHISCI NITRATIS POTASSÆ. TROCHES OF NITRAT OF POTASH.

"Take of Nitrat of Potaſh, one part; Refined Sugar, three parts. Beat them to powder, and, with mucilage of gum tragacanth, make them into a maſs proper for forming troches."

UNDER this form, nitrat of potaſh is ſometimes uſed as a refrigerant in angina tonſillaris, and to allay the ſenſe of heat attending ſalivation.

TROCHISCI AMYLI. STARCH TROCHES. *Pharm. Lond.*

"Take of Starch, one ounce and a half; Liquorice, ſix drachms; Florentine Orris, half an ounce; Refined Sugar, one pound and a half. Rub theſe to powder, and, with mucilage of tragacanth, form troches. They may be made, if it be preferred, without the orris."

THESE troches may exert ſome demulcent power, and may therefore be employed in catarrh; but they are little in uſe.

TROCHISCI MAGNESIÆ. MAGNESIA TROCHES. *Pharm. Lond.*

"Take of Burnt Magneſia, four ounces; Refined Sugar, two ounces; Ginger, in powder, one ſcruple. Rub them together, and, adding mucilage of gum Arabic, form them into troches."

THIS is a pleaſant form for giving magneſia as an antacid.

TROCHISCI SULPHURIS. SULPHUR TROCHES. *Pharm. Lond.*

"Take of Waſhed Flowers of Sulphur, two ounces; Refined Sugar, four ounces; Mucilage of Quince Seeds, as much as may be ſufficient. Rub them together, and form troches."

THIS is deſigned as an agreeable form for the exhibition of ſulphur.

CHAP. XXV.

LINIMENTA, UNGUENTA, ET CERATA.— *LINIMENTS, OINTMENTS, and CERATES.*

THESE are ſimilar forms, conſiſting of unctuous matters, and differing merely in the degree of conſiſtence. A Liniment is of the conſiſtence of thin honey; an Ointment is firmer; and a Cerate ſtill harder. Oil or lard is their common baſis; the due conſiſtence is given by wax or ſpermaceti, and to the compoſition may be added any ſubſtance which is to be uſed under this form. The following general directions are given in the Edinburgh Pharmacopœia for their preparation:

"In making theſe compoſitions, fat and reſinous ſubſtances are to be melted with a gentle heat, ſtirring them conſtantly, ſprinkling in, at the ſame time, dry ingredients, if there are any, in fine powder, until the mixture, by cooling, become ſtiff."

LINIMENTUM

LINIMENTUM SIMPLEX. SIMPLE LINIMENT.

"Take of Olive Oil, four parts; White Wax, one part."

UNGUENTUM SIMPLEX. SIMPLE OINTMENT.

"Take of Olive Oil, five parts; White Wax, two parts."

CERATUM SIMPLEX. SIMPLE CERATE.

"Take of Olive Oil, ſix parts; White Wax, three parts; Spermaceti, one part."

Ceratum Sperma-tis Ceti.

THESE compoſitions differ merely in confiſtence. They are applied ſpread on linen, as uſual dreſſings to ſlight wounds and excoriations.

UNGUENTUM ADIPIS SUILLÆ. OINTMENT OF HOGS LARD. *Pharm. Lond.*

"Take of Prepared Hogs Lard, two pounds; Roſe Water, three ounces. Beat the lard with the roſe water until they are mixed; then liquefy with a gentle heat, and put it aſide, that the water may ſubſide. Afterwards pour off the ointment, ſtirring it conſtantly until it has cooled."

This is ſimilar to the preceding, and is uſed for the ſame purpoſes. It is perhaps more liable to become rancid.

Unguent. Reſin. Flav.

UNGUENTUM RESINOSUM. RESINOUS OINTMENT.

"Take of Hogs Lard, eight parts; White Reſin, five parts; Yellow Wax, two parts."

This is more ſtimulating than the preceding, and is uſed as a dreſſing where the object is to promote ſuppuration.

Cerat. Cantharid.

UNGUENTUM PULVERIS MELOES VESICATORII: *olim, Unguentum Epiſpaſticum Fortius.* OINTMENT OF THE POWDER OF CANTHARIDES.

"Take of Reſinous Ointment, ſeven parts; Powder of Cantharides, one part."

This is the ointment commonly employed to eſtabliſh a purulent diſcharge, or form an iſſue in the part to which a bliſter has been applied; which it does from the acrid and ſtimulating quality of the cantharides.

Unguent. Canthar.

UNGUENTUM INFUSI MELOES VESICATORII: *olim, Unguentum Epiſpaſticum Mitius.* OINTMENT OF INFUSION OF CANTHARIDES.

"Take of Cantharides, White Reſin, Yellow

Wax, of each one part; Venice Turpentine, Hogs Lard, of each two parts; Boiling Water, four parts. Macerate the cantharides in the water for a night, and ſtrain the liquor, preſſing it ſtrongly; having added the lard, boil the liquor till the water is evaporated; then add the wax and reſin. Theſe being melted and removed from the fire, add the turpentine."

THE ointment with the powder of cantharides ſometimes occaſions too much pain and irritation. In ſuch caſes, the ointment from the infuſion of cantharides being milder, is employed, and is ſtill ſufficiently ſtimulating to keep up the purulent diſcharge.

UNGUENTUM SUB-ACETITIS CUPRI: *olim, Unguentum Æruginis.* OINTMENT OF SUB-ACETITE OF COPPER, *or* VERDIGRIS.

"Take of Reſinous Ointment, fifteen parts; Sub-Acetite of Copper, one part."

THIS ointment is uſed as an eſcharotic, applied to foul ulcers. It in general requires to be mixed with an additional proportion of reſinous or ſimple ointment.

UNGUENTUM

UNGUENTUM HYDRARGYRI: *vulgo, Unguentu* *Cœruleum.* OINTMENT OF QUICKSILVER.

“ Take of Quickſilver, Mutton Suet, c each one part; Hogs Lard, three parts. Ru them carefully in a mortar, until the globules c quickſilver diſappear. It may be made al with a double or triple proportion of quickſi ver.”

UNGUENTUM HYDRARGYRI FORTIUS. STRON ER OINTMENT OF QUICKSILVER. *Pharm. Lon*

“ Take of Purified Quickſilver, two pounds Prepared Hogs Lard, twenty-three ounce Prepared Tallow, one ounce. Rub firſt th quickſilver with the tallow and a little lard, until the globules diſappear; then add the r maining lard, ſo as to form an ointment.”

UNGUENTUM HYDRARGYRI MITIUS. MILDE OINTMENT OF QUICKSILVER. *Pharm. Lond.*

“ Take of the Stronger Ointment of Quic ſilver, one part; Prepared Hogs Lard, tw parts. Mix them.”

DURING the trituration of mercury wi

unctuo

unctuous matter, it cannot be doubted that an oxydation of the metal is effected; and the efficacy of the ointment depends in a great meaſure on this oxyd of mercury. It has been alſo ſuppoſed, with ſufficient probability, that the portion of ſebacic acid formed in animal fat, when expoſed to the air, may promote this oxydation, and combine with the oxyd; and the improvement of the ointment on keeping, a fact long obſerved, it is probable is owing to this gradual formation of ſebat of mercury.

Mercurial ointment is the form under which mercury is introduced into the ſyſtem by external friction. It is a mode employed with advantage in caſes where the preparations adminiſtered internally are liable to be too much determined to the inteſtines, ſo as to occaſion griping and purging, and when it is neceſſary to introduce a large quantity of mercury ſpeedily into the ſyſtem; likewiſe in ſome local affections, particularly bubo. One drachm of the ſtrong ointment, (that containing equal parts of mercury and lard), is introduced by friction in the evening, and frequently alſo in the morning, until the ſyſtem is affected. The weaker ointments ought not to be employed, as they merely give unneceſſary trouble, by the neceſſity of rubbing in ſo much lard.

UNGUENTUM OXIDI HYDRARGYRI CINEREI. OINTMENT OF GREY OXYD OF QUICKSILVER.

"Take of Grey Oxyd of Quickſilver, one part; Hogs Lard, three parts."

THIS is deſigned as a ſubſtitute for the mercurial ointment, and, as the quickſilver is fully oxydated, it has been ſuppoſed that it will prove more active.

UNGUENTUM OXIDI HYDRARGYRI RUBRI. OINTMENT OF RED OXYD OF QUICKSILVER.

"Take of Red Oxyd of Quickſilver by Nitric Acid, one part; Hogs Lard, eight parts."

THIS is applied as a mild eſcharotic to remove the diſeaſed ſurface of ulcers, and as a ſtimulant to promote ſuppuration.

UNGUENTUM CALCIS HYDRARGYRI ALBÆ. OINTMENT OF WHITE CALX OF QUICKSILVER. *Pharm. Lond.*

"Take of White Oxyd of Quickſilver, one drachm; Ointment of Hogs Lard, one ounce and a half. Mix them ſo as to form an ointment."

THIS ointment is ſometimes uſed as an application in pſora, and other cutaneous affections.

UNGUENTUM NITRATIS HYDRARGYRI FORTIUS: *vulgo, Unguentum Citrinum.* STRONGER OINTMENT OF NITRAT OF QUICKSILVER.

Unguent. Hydrargyr. Nitrat.

" Take of Purified Quickſilver, one part; Nitrous Acid, two parts; Hogs Lard, twelve parts. Digeſt the quickſilver with the nitrous acid, in a ſand-bath, until a ſolution is obtained, which, while it is hot, is to be mixed with the hogs lard melted and beginning to cool. Beat the mixture thoroughly in a glaſs mortar, ſo as to form an ointment."

IN this ointment the nitrat of quickſilver is combined with the lard; and as there is alſo an exceſs of nitric acid, it acts chemically on the fat, and gives to the compoſition a very firm conſiſtence. It is an excellent application to certain cutaneous affections, a ſmall quantity being rubbed on the part.

UNGUENTUM NITRATIS HYDRARGYRI MITIUS. MILDER OINTMENT OF NITRAT OF QUICKSILVER.

" This is made in the ſame manner as the preceding, with a triple proportion of lard."

IT is of courſe a much milder application, and is deſigned to be alſo of a ſofter conſiſtence ; but, to obtain the latter convenience, it is better to reduce the ſtrong ointment with the requiſite proportion of lard.

UNGUENTUM ACIDI NITROSI. OINTMENT OF NITROUS ACID.

" Take of Hogs Lard, one pound ; Nitrous Acid, ſix drachms. Mix the acid gradually with the melted lard, and beat the mixture thoroughly while it cools."

IN this preparation part of the acid is decompoſed, and part of it combined with the lard. It is deſigned as an application in cutaneous affections, and is ſimilar in its effects to the preceding ointment.

UNGUENTUM OXIDI PLUMBI ALBI. OINTMENT OF WHITE OXYD OF LEAD.

“ Take of Simple Ointment, five parts; Oxyd of Lead, one part.”

THIS has been uſed principally as an application to burns and ſuperficial inflammation.

UNGUENTUM ACETITIS PLUMBI: *vulgo, Unguentum Saturninum:* OINTMENT OF ACETITE OF LEAD.

Unguent
Ceruſſæ
Acetatæ.

“ Take of Simple Ointment, twenty parts; Acetite of Lead, one part.”

THIS ointment is applied to the ſame purpoſes as the preceding, and is more frequently uſed.

CERATUM LITHARGYRI ACETATI COMPOSITUM. COMPOUND CERATE OF ACETATED LITHARGE. *Pharm. Lond.*

“ Take of Water of Acetated Litharge, two ounces and a half; Yellow Wax, four ounces; Olive Oil, nine ounces; Camphor, half a drachm. Rub the camphor with a little of the oil. Melt the wax with the remaining oil, and as ſoon as the mixture begins to become thick, pour on gradually the water of acetated litharge, and ſtir conſtantly until the mixture has cooled; then mix with it the camphor rubbed with the oil."

THIS ointment, uſually named *Goulard's Cerate*, differs little from the preceding, and is applied to ſimilar uſes.

Cerat. Lapid. Calam.

CERATUM CARBONATIS ZINCI IMPURI: *olim, Ceratum Lapidis Calaminaris.* CERATE OF IMPURE CARBONAT OF ZINC.

"Take of Simple Cerate, five parts; Prepared Impure Carbonat of Zinc, one part."

THIS is the common healing cerate applied to ſlight wounds, excoriations, &c.; and as a dreſſing to ulcers. The carbonat of zinc ſeems to give it merely a ſtiffer conſiſtence.

Unguent. Tutiæ.

UNGUENTUM OXIDI ZINCI IMPURI: *olim, Unguentum Tutiæ.*

"Take of Simple Liniment, five parts; Prepared Impure Oxyd of Zinc, one part."

THIS has been uſed principally as an application in chronic ophthalmia.

UNGUENTUM OXIDI ZINCI. OINTMENT OF OXYD OF ZINC.

" Take of Simple Liniment, ſix parts; Oxyd of Zinc, one part."

OINTMENT of oxyd of zinc is ſometimes uſed as a dreſſing to ulcers, and ſometimes as an application in ophthalmia.

UNGUENTUM PICIS. OINTMENT OF TAR.

Ungue
Picis.

" Take of Tar, five parts; Yellow Wax, two parts."

THIS ſtimulating ointment is ſometimes applied to foul ulcers, and has been alſo uſed with advantage in tinea capitis.

UNGUENTUM SULPHURIS. OINTMENT OF SULPHUR.

Ungue
Sulph.

" Take of Hogs Lard, four parts; Sublimed Sulphur, one part. To each pound of this ointment, add of Eſſential Oil of Lemon, or Eſſential Oil of Lavender, half a drachm."

UNDER this form, ſulphur is applied, by friction, as a remedy in pſora.

UNGUENTUM ELEMI COMPOSITUM. COMPOUND OINTMENT OF ELEMI. *Pharm. Lond.*

"Take of Elemi, one pound; Common Turpentine, ten ounces; Prepared Suet, two pounds; Olive Oil, two ounces. Melt the elemi with the ſuet, and having removed it from the fire, mix it immediately with the turpentine and oil; then ſtrain the mixture."

THIS ointment is moderately ſtimulating, ſomewhat ſimilar to the reſinous ointment.

UNGUENTUM HELLEBORI ALBI. OINTMENT OF WHITE HELLEBORE. *Pharm. Lond.*

"Take of White Hellebore, rubbed to powder, one ounce; Ointment of Hogs Lard, four ounces; Eſſence of Lemon, half a ſcruple. Mix them, ſo as to form an ointment."

HELLEBORE is uſed, under this form, as an application to pſora. It is ſometimes effectual, and is leſs diſagreeable than the ſulphur ointment.

UNGUENTUM SAMBUCI. OINTMENT OF ELDER. *Pharm. Lond.*

"Take of the Flowers of Elder, four pounds; Prepared Mutton Suet, three pounds; Olive Oil, one pound. Boil the flowers of elder with the ſuet and the olive oil until they become friable; then preſs out the fluid, and ſtrain it."

THE elder flowers communicate nothing to the unctuous matter, but a rich green colour.

CERATUM SAPONIS. CERATE OF SOAP. *Pharm. Lond.*

"Take of Soap, eight ounces; Yellow Wax, ten ounces; Litharge, in powder, one pound; Olive Oil, one pound; Vinegar, one gallon. Boil the vinegar with the litharge on a gentle fire, ſtirring conſtantly until the mixture become uniform and thick; then mix with it the other ingredients, ſo as to form a cerate."

THIS compoſition muſt derive any efficacy it has, principally from the acetite of lead, formed by the boiling of the vinegar on the litharge.

CHAP. XXVI.

EMPLASTRA.—PLASTERS.

PLASTERS differ from Ointments in their much firmer conſiſtence, which is ſuch, that they do not adhere to the hand, and require to be heated in order to be ſpread. They owe this conſiſtence, in general, to a larger proportion of wax, or ſometimes to the addition of certain metallic oxyds, particularly thoſe of lead, which unite chemically with the unctuous matter. The ſame rules are to be obſerved in their preparation, as in that of Ointments.

* * *

Emplaſtrum Ceræ Compoſit.

EMPLASTRUM SIMPLEX: *olim, Emplaſtrum Cereum.* SIMPLE PLASTER.

"Take of Yellow Wax, three parts; Mutton Suet, Reſin, of each two parts."

The principal uſe of this plaſter is as a dreſſing, when ſpread thin on linen, to the part to which a bliſter has been applied.

EMPLASTRUM OXIDI PLUMBI SEMI-VITREI: *olim, Emplaſtrum Commune.*

Emplaſtr. Lithargyr.

"Take of the Semi-vitreous Oxyd of Lead, one part; Olive Oil, two parts. Having added water, boil them, ſtirring conſtantly, until the oil and the oxyd unite into a plaſter."

This is a chemical combination of the expreſſed oil with the oxyd of lead, and is of a conſiſtence ſufficiently hard to form a plaſter. It is uſed, ſpread on leather or linen, as an application to excoriations, or ſlight wounds.

EMPLASTRUM RESINOSUM: *olim, Emplaſtrum Adhæſivum.* RESINOUS PLASTER.

Emplaſtrum Lithargyr. cum Reſina.

"Take of Plaſter of Semi-vitreous Oxyd of Lead, five parts; Reſin, one part."

The plaſter of litharge is rendered more adheſive, and ſomewhat ſtimulating, by this intermixture of reſin.

EMPLASTRUM OXIDI FERRI RUBRI : *olim, Emplaſtrum Roborans.*

"Take of Plaſter of Semi-vitreous Oxyd of Lead, twenty-four parts; Reſin, ſix parts; Yellow Wax, Olive Oil, of each three parts; Red Oxyd of Iron, eight parts. Rub the red oxyd of iron with the oil, and add it to the other ingredients melted."

THIS, ſpread on leather, is ſometimes uſed as an application in ſlight caſes of lumbago, and ſeems to prove uſeful, merely by affording a mechanical ſupport.

EMPLASTRUM ASSÆ FOETIDÆ. ASSAFOETIDA PLASTER.

"Take of Plaſter of Semi-vitreous Oxyd of Lead, Aſſafœtida, Galbanum, Yellow Wax, of each one part."

THIS plaſter is ſometimes applied to the breaſt or ſide, as a remedy in hyſteric affections.

EMPLASTRUM GUMMOSUM. GUM PLASTER.

"Take of Plaſter of Semi-vitreous Oxyd of Lead, eight parts; Ammoniac, Galbanum, Yellow wax, of each one part."

This plaſter has been uſed as an application to indolent tumours, and ſometimes to promote ſuppuration.

EMPLASTRUM HYDRARGYRI. QUICKSILVER PLASTER.

Emplaſt Litharg. cum Hydrargyro.

"Take of Olive Oil, Reſin, of each one part; Quickſilver, three parts; Plaſter of Semi-vitreous Oxyd of Lead, ſix parts. Rub the quickſilver with the oil and reſin melted together, and then cooled, until the globules diſappear; then add, gradually, the plaſter of ſemi-vitreous oxyd of lead, melted, and mix the whole carefully."

This plaſter is applied as a diſcutient to indolent tumours.

EMPLASTRUM SAPONACEUM. SOAP PLASTER.

Emplaſt. Saponis.

"Take of Plaſter of Semi-vitreous Oxyd of Lead, four parts; Gum Plaſter, two parts; Soap ſliced, one part. Mix the ſoap with the plaſters melted together; then boil a little, ſo as to form a plaſter."

This has likewiſe been ſuppoſed to poſſeſs a diſcutient quality; but it is much inferior to the mercurial plaſter, and is ſcarcely ever uſed.

Emplaſt. Cantharid.

EMPLASTRUM MELOES VESICATORII : *olim, Emplaſtrum Veſicatorium.* PLASTER OF CANTHARIDES.

"Take of Mutton Suet, Yellow Wax, Reſin, Cantharides, of each equal weights. Mix the cantharides, rubbed into a fine powder, with the other ingredients, melted together, and removed from the fire."

THIS is the plaſter uſually employed to raiſe a bliſter. It is of a ſofter conſiſtence than the other plaſters, that it may admit of being ſpread without the aſſiſtance of heat, which would impair the acrid quality of the cantharides. It requires to be applied twelve hours to produce a perfect bliſter: it is then removed; the veſicle is cut, and the inflamed ſurface dreſſed with ſimple cerate or plaſter.

EMPLASTRUM MELOES VESICATORII COMPOSITUM. COMPOUND PLASTER OF CANTHARIDES.

"Take of Burgundy Pitch, Turpentine, Cantharides, of each twelve parts; Yellow Wax, four parts; Sub-acetite of Copper, two parts; Muſtard Seed, Black Pepper, of each one part.

To the Burgundy pitch and wax melted, add the turpentine. When this is melted, and while the fluid is ſtill warm, add the other ingredients mixed and rubbed to a fine powder, ſtirring conſtantly, ſo as to form a plaſter."

It occaſionally happens, that the common plaſter of cantharides is inſufficient to excite a bliſter, even when its ſurface has been ſprinkled over with powdered cantharides. In ſuch caſes, or even in others, where it is neceſſary that a bliſter ſhould be quickly raiſed, this more powerful compoſition may be employed. Its operation is accompanied with a very pungent ſenſation of heat.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO.

PLASTER OF AMMONIAC WITH QUICKSILVER.

Pharm. Lond.

" Take of Strained Ammoniac, one pound; Purified Quickſilver, three ounces; Sulphurated Oil, one drachm, or as much as may be ſufficient. Rub the quickſilver with the ſulphurated oil, until the globules diſappear; then add gradually the melted ammoniac, and mix them."

THIS is ſimilar in its powers to the ſimple mercurial plaſter, and is applied to the ſame purpoſes.

EMPLASTRUM CUMINI. CUMIN PLASTER. *Pharm. Lond.*

"Take of Cumin, Caraway, Bay Berries, of each three ounces; Burgundy Pitch, three pounds; Yellow Wax, three ounces. With the pitch and wax melted, mix the other ingredients rubbed to powder."

THIS has been applied to the region of the ſtomach as a moderate ſtimulant, certainly with no great effect.

EMPLASTRUM LADANI COMPOSITUM. COMPOUND PLASTER OF LADANUM. *Pharm. Lond.*

"Take of Ladanum, three ounces; Frankincenſe, one ounce; Cinnamon in powder, Expreſſed Oil of Nutmeg, of each half an ounce; Oil of Spearmint, one drachm. To the melted frankincenſe add firſt the ladanum, ſoftened by heat, then the expreſſed oil of nutmeg; afterwards mix theſe and the cinnamon with the oil of ſpearmint, and beat them in a warm mortar. Keep the plaſter in a cloſe veſſel."

THIS plaſter has been applied, like the former, to relieve nauſea and flatulence, and is undoubtedly a more powerful ſtimulant.

EMPLASTRUM LITHARGYRI COMPOSITUM. COMPOUND LITHARGE PLASTER. *Pharm. Lond.*

"Take of Litharge Plaſter, three pounds; Strained Galbanum, eight ounces; Common Turpentine, ten drachms; Frankincenſe, three ounces. Mix the frankincenſe, rubbed to powder, with the galbanum and turpentine melted, and add the litharge plaſter, melted with a ſlow fire."

THIS is ſimilar in its qualities to the gum plaſter, and is uſed, like it, as a diſcutient, and to promote ſuppuration.

EMPLASTRUM PICIS BURGUNDICÆ COMPOSITUM. COMPOUND BURGUNDY PITCH PLASTER. *Pharm. Lond.*

"Take of Burgundy Pitch, two pounds; Ladanum, one pound; Yellow Reſin, Yellow Wax, of each four ounces; Expreſſed Oil of Nutmeg, one ounce. To the pitch, reſin and wax, melted together, add firſt the ladanum, then the oil of nutmeg."

Burgundy Pitch, with the addition of a little wax to give it more tenacity, is in common uſe as a rubefacient, under the form of plaſter. The addition of the other ingredients of this compound plaſter, may render it rather more ſtimulating.

EMPLASTRUM THURIS COMPOSITUM. COMPOUND FRANKINCENSE PLASTER. *Pharm. Lond.*

"Take of Frankincenſe, half a pound; Dragons Blood, three ounces; Litharge Plaſter, two pounds. To the litharge plaſter melted, add the others rubbed to powder."

This is ſimilar to the Plaſter of Red Oxyd of Iron of the Edinburgh Pharmacopœia, and is applied to the ſame uſes.

CATA-

CATAPLASMATA.—CATAPLASMS.

CATAPLASMA ALUMINIS. ALUM CATAPLASM. *Pharm. Lond.*

" Take the Whites of two Eggs: agitate them with a piece of Alum, until a coagulum is formed."

THIS is ſometimes employed as an aſtringent application in ſome caſes of ophthalmia.

CATAPLASMA CUMINI. CUMIN CATAPLASM. *Pharm. Lond.*

" Take of Cumin, one pound; Bay Berries, Dried Scordium, Virginian Snake-root, of each three ounces; Cloves, one ounce. Rub them all together into powder; and having added three times their weight of honey, form a cataplaſm."

THIS has been uſed as a ſtimulating cataplaſm to parts ſhewing a diſpoſition to gangrene.

CATAPLASMA SINAPEOS. MUSTARD CATAPLASM. *Pharm. Lond.*

"Take of Muſtard in Powder, Crumb of Bread, of each half a pound; Vinegar, warm, as much as is ſufficient. Mix, ſo as to make a cataplaſm."

THIS is the common ſinapiſm which is applied with advantage, as a powerful ſtimulant, to the ſoles of the feet, in typhus where there is a determination to the head, and in comatoſe affections.

APPENDIX.

APPENDIX, No. I.

TO this Appendix I have, for the reaſons ſtated in the Preface, referred the medical hiſtory of the Gaſes, of Electricity, and Galvaniſm.

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OF THE GASES EMPLOYED AS REMEDIES.

SUBSTANCES exiſting in the aërial form, might *a priori* be ſuppoſed capable of producing important effects on the ſyſtem, as by reſpiration they are brought to act directly on the maſs of blood, and induce in it chemical changes. And they actually occaſion immediate and ſtriking alterations in the functions of life.

Though the expectations that were at one time formed, with regard to their medicinal efficacy, have not been realized, and the uſe of them has now been nearly relinquiſhed ; yet ſince they are capable of producing important changes in the ſtate of the functions, and of the general ſyſtem, and ſince the propoſition muſt be admitted, that every ſubſtance poſſeſſed of ſuch powers may be capable of acting as a powerful remedy, they ought not to be entirely loſt ſight of, or be diſcarded from the materia medica. In the aerial kingdom, we have actually the two extremes of Stimulant and Sedative Power.

The modes of preparing theſe gaſes are, in a great meaſure, peculiar to each of them. The manner of adminiſtering them is nearly the ſame. They may be breathed from a jar placed in water ; but this is difficult, from the effort required to ſuſtain the column of water within the jar. This may be partly remedied, by poiſing the jar in water, or, more completely, by breathing from the Gazometer. But the eaſieſt mode is, for the patient to breathe the gas from a ſilk bag, to which a tube with a ſtop-cock is affixed. In inſpiring and expiring the gas, the noſtrils require to be cloſed.

The gaſes that have been employed in medicine, may be conſidered under the diviſions of thoſe which *excite*, and thoſe which *depreſs* the functions of life. To the former order belong,

GAS OXYGENIUM. OXYGEN GAS.
GAS OXYDUM NITROSUM. NITROUS OXYD GAS.

OXYGEN GAS is procured from black oxyd of mangaueſe by heat. A quantity of the oxyd is put into an iron tube, and expoſed to a red heat: the gas is tranſmitted through water, and is allowed to ſtand over it for ſome hours before it is breathed.

As oxygen is ſo immediately neceſſary to the ſupport of life, it might be ſuppoſed, that when afforded in a more pure and concentrated ſtate than that in which we breathe it in atmoſpheric air, it would prove a ſalutary agent of no inconſiderable power. To this inference, however, independent of any experience, an objection occurs, founded on ſome experiments made by Lavoiſier, and repeated by Davy, which prove, that when animals are ſupplied with pure oxygen, or with oxygen mixed with a portion of atmoſpheric air, ſtill leſs of it is conſumed than in ordinary reſpiration. But though this fact ſhould be admitted, the greater activity of pure oxygen gas on the ſyſtem is undoubted. It is ſhewn by the effects which reſult from its inſpiration, and ſtill more forcibly by the fact aſcertained by Prieſtley, Lavoiſier, and Davy, that animals confined in air, with an increaſed proportion of oxygen, die before it is exhauſted, and even while the air which they breathe contains more oxygen than common air, and can enable another animal to live.

Oxygen, when reſpired, acts partly by communicating a ſtimulating quality to the blood, by which the left ſide of the heart and the arterial ſyſtem are excited to action. The phenomena of aſphyxia from its abſtraction, prove that it likewiſe exerts ſome other operation more immediately ſubſervient to the functions of life.

The diſeaſes in which oxygen gas has been adminiſtered, are principally thoſe of chronic debility,—chloroſis, aſthma, ſcrofula, dropſy, paralyſis, and ſome cutaneous affections. It requires to be diluted with from ten to twenty or more parts of atmoſpheric air, increaſing the proportion of oxygen according to the effects produced. From one to two quarts of oxygen are given, by breathing it in its diluted ſtate, at intervals, in the courſe of the day. It generally increaſes the force and velocity of the pulſe.

NITROUS OXYD GAS.—This gas, a compound of oxygen and azot, in the proportion of 37 of the former to 63 of the latter, is moſt economically obtained, and in greateſt purity, from the decompoſition of nitrat of ammonia by heat. When this ſalt is expoſed to a temperature about 400° of Fahrenheit's ſcale, its principles re-act on each other, and enter into new combinations. The hydrogen of the ammonia attracts part of the oxygen of the nitric acid to form water; and the remaining oxygen combining with the azot both of the acid and of the ammonia, forms this particular compound, nitrous oxyd, which is diſengaged in the gaſeous form. It requires to ſtand ſome hours to depoſite a ſmall portion of ſaline matter, before it is fit to be breathed.

The effects of nitrous oxyd gas on the ſyſtem, when it is reſpired, are ſcarcely analogous to thoſe of any other agent. The excitement which it produces is extended to the functions of body and mind with more rapidity and force than that ariſing from the action of the moſt powerful ſtimulants. It is accompanied with ſenſations as various as they are peculiar; and, what ſtill more marks the ſingularity of its operation, this high excitement of the functions of life and exhilaration of mind are not followed by proportional languor or debility; the ſtate of the ſyſtem gradually returns to the healthy ſtandard, without any apparent waſte of power. A ſubſtance capable of acting in ſuch a manner, we might ſuppoſe, would prove one of our moſt valuable remedies. The tranſient nature of its operation muſt undoubtedly limit its medicinal efficacy; but ſtill, in diſeaſes of extreme debility, we ſeem juſtified in expecting from its adminiſtration the moſt beneficial effects. It has not, however, been very extenſively employed. In paralyſis it has been uſed with advantage. In diſeaſes of increaſed ſenſibility, it may prove hurtful; and when breathed by delicate females, it has, in more than one inſtance, induced hyſteric affections. The doſe which is requiſite to produce its peculiar effects varies from four to nine quarts, which may be breathed pure or diluted with an equal part of atmoſpheric air. It cannot be breathed undiluted for more than four minutes and a half, inſenſibility being induced.

Nothing ſatisfactory can be ſaid as to its mode of action, ſince we know ſo little of the connection which ſubſiſts between the phenomena of life and the chemical changes which go on in the ſyſtem. We can only mark the diſſimilarity of its operation to that of any other phyſical agent.

* * *

UNDER the ſecond ſub-diviſion of the Gaſes,—thoſe which depreſs the functions of life, might probably be placed all the ſubſtances exiſting in the aerial form, oxygen and nitrous oxyd excepted. The following are thoſe which have been medicinally employed:

GAS HYDROGENIUM. HYDROGEN GAS.

GAS AZOTICUM. AZOTIC GAS.

GAS ACIDUM CARBONICUM. CARBONIC ACID GAS.

GAS HYDROGENIUM CARBONATUM. CARBONATED HYDROGEN GAS.

Hydrogen gas, when it is to be breathed, is to be procured by paſſing water in vapour over pure iron heated to the temperature of ignition. The iron attracts the oxygen of the water, and the hydrogen aſſumes the aerial form.

Hydrogen gas received into the lungs does not appear to exert any poſitive deleterious power: all its effects ſeem referable merely to the excluſion of oxygen. In a pure ſtate, if the lungs have been previouſly emptied as much as poſſible of atmoſpheric air, it cannot be breathed above three quarters of a minute. It quickly occaſions a giddineſs and ſenſe of ſuffocation; the countenance becomes livid, and the pulſe ſinks rapidly; but, when diluted with two-thirds or an equal part of atmoſpheric air, it can be ſafely breathed; nor does it appear to produce any very important effect. It occaſions ſome diminution of muſcular power and ſenſibility, and a reduction of the force of the circulation. It has been uſed in catarrh, hæmoptyſis, and phthiſis, but its powers ſeem merely thoſe of a palliative.

Azot.—What has been ſaid of hydrogen applies likewiſe to azot. It ſeems to exert no poſitive action on the ſyſtem, but to produce its effects by excluding oxygen. As it is not ſo eaſily obtained pure as hydrogen, it has been leſs employed.

Carbonic acid gas.—To obtain this gas in a proper ſtate of purity for breathing, carbonat of lime (chalk or white marble), is expoſed to a ſtrong red heat in an iron tube. The carbonic acid which is diſengaged is collected over water, as it is not immediately largely abſorbed by that fluid.

This acid gas, when it is inſpired, proves more ſpeedily fatal than azot or hydrogen. It appears to excite ſpaſmodic contraction of the epiglottis, ſo as very ſpeedily to induce ſuffocation; and it has this effect, even when diluted with nearly an equal part of atmoſpheric air.

The reſpiration of carbonic acid gas was employed at an earlier period than that of the other gaſes. It was celebrated as a remedy in phthiſis. In the many caſes however in which it has been tried, though it might leſſen the expectoration, diminiſh the hectic fever, and act as an anodyne, there is little evidence of its having ultimately effected a cure. It is given diluted with four or ſix parts of atmoſpheric air.

Carbonic acid has likewiſe been employed as a local application to cancer and painful ulceration, and has at leaſt been ſerviceable as a palliative. A ſtream of it is directed on the part by means of a flexible tube. A cataplaſm, formed of ſubſtances in a ſtate of fermentation has, in ſome meaſure, a ſimilar effect.

CARBONATED HYDROGEN GAS.——The gas which has been uſed in medicine under this name, is obtained by paſſing the vapour of water over charcoal at the temperature of ignition, in an iron tube. The oxygen of the water unites with one part of the charcoal, forming carbonic acid; the hydrogen combines with another part of it, and forms this ſpecies of carbonated hydrogen. The carbonic acid is abſtracted by agitating the gas in lime-water.

This is the moſt active of thoſe gaſes which operate by depreſſing the functions of life, and is perhaps the moſt powerful agent of this kind.

Even when largely diluted with atmoſpheric air, it occaſions immediate vertigo, ſickneſs, diminution of the force and velocity of the pulſe, reduction of muſcular vigour, and in general every ſymptom of diminiſhed power. It can ſcarcely be breathed in an undiluted ſtate. Mr Davy found, that at the third inſpiration, total inſenſibility was induced, and ſymptoms of extreme debility continued for a conſiderable time.

As a medicinal agent, it is the gas of which the evidence in favour of its efficacy is greateſt. In phthiſis, in many caſes, it unequivocally relieved the ſymptoms, and at leaſt arreſted the progreſs of the diſeaſe. Much caution is requiſite with regard to the doſe. At firſt, one pint of the carbonated hydrogen gas, diluted with twenty parts of atmoſpheric air, may be reſpired; the quantity may be ſlowly increaſed, and with leſs dilution, taking care to avoid the production of great vertigo or muſcular debility. Not more than from two to four quarts can be taken in the day, even when the patient has been accuſtomed to it for ſome time. It is always more powerful when recently prepared, than when it has been kept for ſome days.

ELECTRICITY.

The medicinal operation of electricity may be referred to its ſtimulant power. It produces forcible contractions in the irritable fibre; excites therefore to action, if duly applied; and, when in exceſs, immediately exhauſts irritability. It poſſeſſes the important advantages of being eaſily brought to act locally, and of being confined to the part to which it is applied, while it can alſo be employed in every degree of force.

Electricity is applied to the body under the form of a ſtream or continued diſcharge of the fluid, under that of ſparks, and under that of a ſhock; the firſt being the moſt gentle, the ſecond being more active, and the laſt being much more powerful than either of the others. The ſtream is applied by connecting a pointed piece of wood, or a metal wire, with the prime conductor of the electrical machine, and holding it by a glaſs handle one or two inches diſtant from the part to which it is to be directed. A very moderate ſtimulant operation is thus excited, which is better adapted to ſome particular caſes than the more powerful ſpark or ſhock. The ſpark is drawn by placing the patient on the inſulated ſtool connected with the prime conductor, and, while the machine is worked, bringing a metal knob within a ſhort diſtance of the part from which the ſpark is to be taken. A ſenſation ſomewhat pungent is excited, and ſlight muſcular contractions may be produced; theſe effects being greater or leſs, according to the diſtance at which the knob is held, if the machine be ſufficiently powerful. The ſhock is given by diſcharging the Leyden phial, making the part of the body through which it is intended to be tranſmitted, part of the circuit. The ſenſation it excites is unpleaſant, and the muſcular contractions conſiderable, if the ſhock is moderately ſtrong.

At the firſt introduction of electricity as a remedy, it was very highly celebrated for its efficacy in a number of diſeaſes; its uſe is now confined to a few. In paralyſis it is very generally had recourſe to, to excite muſcular contraction, and perhaps with ſome advantage. It is uſually applied under the form of ſparks, the application of it requiring to be continued daily for a conſiderable time. Sometimes moderate ſhocks are alſo employed; but the propriety of this practice is ſomewhat doubtful. In ammenorrhœa, as the ſtimulant operation can be excited, in ſome meaſure, in the veſſels which are affected, advantage may be derived from electricity; and it is occaſionally uſed, both under the form of ſparks taken from the pelvis, and that of moderate ſhocks tranſmitted through it. Ophthalmia, and ſome other varieties of inflammation, have been removed by the electric ſtream; it has alſo ſometimes ſucceeded in diſcuſſing tumours, and relieving pain. The general rule for the medical employment of electricity, is to apply it at firſt under the milder forms, and gradually to raiſe it, if neceſſary, to the more powerful.

GALVANISM.

The peculiar power which is generated when two metals moiſtened are in contact, at firſt named Animal Electricity, ſince Galvaniſm, has been recently applied as a remedy in various morbid affections. Its effects on the animal ſyſtem are ſuch as warrant this application. Its activity is ſhewn by its exciting ſtrong ſenſations in ſenſible parts, and powerful contractions in parts endowed with irritability.

Between galvaniſm and electricity there are ſo many points of reſemblance, that they have been conſidered as ultimately the ſame power, or as the ſame ſubtile matter in different ſtates. Whether this opinion be juſt or not, the effects of galvaniſm on living matter are different from thoſe of electricity. The ſenſation which the former excites, though ſomewhat analogous to that produced by the latter, is ſtill diſſimilar;

the action of galvaniſm is more extended, both to the nervous and muſcular ſyſtems, than that of electricity, which is more local in its action. The galvanic excitation produces ſenſations and contractions in parts, which, from diſeaſe, are not ſenſible to electrical impreſſions; and the ſtimulant power which both exert, appears in galvaniſm, to be greater in proportion to its intenſity than in electricity; or the ſenſations and muſcular contractions which the galvanic diſcharge excites, are more than proportioned to its power of producing electrical phenomena.

The diſeaſes in which galvaniſm has hitherto been employed, are principally thoſe of the nervous kind. In paralyſis, it has been affirmed to have reſtored the capability of muſcular contraction, and conſequently the power of motion. Caſes of chorea, tetanus, and ſome other ſpaſmodic affections, have been related, in which perfect cures were accompliſhed by its application. It appears, in ſeveral inſtances, to have relieved deafneſs, particularly that ſpecies of it ariſing from torpor of the auditory nerve; and it has been ſucceſsful in diſcuſſing indolent tumours.

Galvaniſm is applied by connecting two metallic wires with the two extremities of a galvanic battery, and bringing them in contact with the part affected, ſo that it ſhall form part of the circuit of the galvanic diſcharge: the one wire is kept in contact with the part it touches; the other is alternately applied for a moment and removed. If the ſkin is moiſtened, the galvanic influence is communicated more readily and effectually; and ſtill more ſo if a ſmall piece of metallic leaf be laid on the parts to which the wires are applied. Sometimes even the cuticle has been previouſly removed by a bliſter, but the application of the galvaniſm is then attended with pain.

APPENDIX, No. II.

ON MEDICAL PRESCRIPTIONS.

THE principal objects deſigned to be attained by the Compoſition of Medicines, are, to communicate an agreeable taſte or flavour; to give a convenient form; to correct the operation of the principal medicine, or obviate ſome unpleaſant ſymptom it is liable to produce; to promote its action, by the additional article exerting one of a ſimilar kind; to obtain the joint operation of two remedies, having different powers; or to alter their uſual effects, by the power which one may have of modifying the action of another.

A preſcription has been uſually divided into four parts, which compoſe it,—the *baſis*, or principal

cipal article; the *adjuvans*, or that deſigned to promote the action of the former; the *corrigens*, or that which is intended to correct its operation, or obviate any unpleaſant ſymptom which it may be apt to produce; and the *conſtituens*, or that which gives to the other ingredients conſiſtence or form. Theſe are not neceſſarily preſent in every formula; nor is the diviſion of much importance, except as perhaps affording the beſt principle for regulating the order in which the ingredients of a preſcription ſhould be enumerated.

The following are the principal circumſtances to be attended to in forming a preſcription.

1*ſt*, Simplicity ſhould be attained, as far as is conſiſtent with the objects of the preſcription. Nothing ought to enter into the compoſition which does not add to its virtue, render it leſs ungrateful, give it a convenient form, or which is not neceſſary to conceal any particular ingredient; and, in general, the practice of accumulating a number of articles in one preſcription is to be avoided.

2*dly*, Subſtances, it is evident, ought not to be mixed together, which are capable of entering into chemical combination, or of decompoſing each other, unleſs it be with the view of obtaining the product of the combination, or decompoſition, as a remedy.

3*dly*, Thoſe mixtures are alſo to be avoided, in which one medicine, by its peculiar action on the ſtomach or general ſyſtem, modifies and changes the action uſually exerted by another, unleſs where the object is to obtain the effects of that modified operation.

4*thly*, The error of contra-indication is to be guarded againſt, or thoſe medicines ought not to be combined, the virtues of which are not merely different, but are, in ſome meaſure, oppoſed to each other.

5*thly*, The ingredients which are to be mixed, muſt be ſuch as will mix properly together, ſo that the form in which the remedy is deſigned to be exhibited, may be eaſily obtained and preſerved.

Laſtly, The form under which a medicine is preſcribed, muſt be adapted to certain circumſtances; principally to the nature of the diſeaſe, the nature of the remedy itſelf, and, as far as may be poſſible, to the taſte of the patient.

THE Doſes of Medicines are not reducible to any general rules, from their general ſimilarity of operation, or any other circumſtance. The principal circumſtances by which they are influenced are, Age, Sex, Temperament, Idioſyncraſy, Habit, and Diſeaſe.

Age.—From infancy to manhood, a larger doſe of any medicine is requiſite to produce its effect, in proportion to the advance in life. From manhood to old age, there is a ſimilar gradation with regard to diminution of doſe, though in a much leſs proportion than that which regulates the increaſe. The following table has been ſuppoſed to ſhew theſe proportions.

TABLE.

TABLE.

Let the doſe for a perſon of middle age be			1 or 1 drachm.
For one from	xiv to xxi years, it will be	- - -	$\frac{2}{3}$ or 2 ſcruples.
————	vii to xiv,	—	$\frac{1}{2}$ or half a dr.
————	iv to vii,	—	$\frac{1}{3}$ or 1 ſcruple.
——— of	iv years of age,	—	$\frac{1}{4}$ or 15 grains.
————	iii ———	—	$\frac{1}{6}$ or half a ſcr.
————	ii ———	—	$\frac{1}{8}$ or 8 grains.
————	i ———	—	$\frac{1}{12}$ or 5 grains.

Sex.—Women, in general, require ſmaller doſes of any medicine than men, a difference probably owing to their greater ſenſibility from their habits of life.

Temperament.—Thoſe of the ſanguine temperament are ſuppoſed to be more affected by medicines, and therefore to require ſmaller doſes than thoſe of the phlegmatic or melancholic; but in what has been ſaid on this ſubject, there is ſo much uncertainty, that little reliance can be placed on it.

Idioſyncraſy.—This denotes that diſpoſition in individuals to be affected by certain cauſes, in a manner different from the generality of mankind. Such idioſyncraſies are obſerved with

regard

regard to medicines, as well as to other agents; and, where they are known, require to be attended to by the preſcriber.

Habit.—This has an important influence on the operation of medicines. In general, they loſe ſome of their power by having been long continued. This is particularly the caſe with all ſtrong ſtimulants and narcotics, and is even obſerved, to a certain extent, in ſome of the other claſſes of the materia medica. In a few inſtances, the reverſe has been ſuppoſed to hold true.

Diſeaſe.—This has an influence on the doſes of medicines not leſs important; the ſuſceptibility to external impreſſions, and to action, being much varied in morbid affections, and the operations of remedies of courſe being modified by ſuch variations. The ſtate of ſuſceptibility being in general apparent, when it varies much from the healthy ſtandard, the doſes of the medicines adminiſtered are eaſily regulated.

TABLES

OF

CHANGED NAMES.

TABLES
OF
CHANGED NAMES
IN
THE NEW EDINBURGH AND LONDON PHARMACOPOEIAS.

In drawing up theſe Tables, it has not been thought neceſſary to inſert the names of the Simple Medicines, as both the proper names of the articles, according to the nomenclature of natural hiſtory, and their common or trivial names, are inſerted in the index to the work; and thus the old or the new name of any ſimple ſubſtance may be eaſily found. In theſe tables, therefore, the names of the Compound Medicines only are inſerted, and the catalogue of them has been extended ſo far as to include not only the ſynonyms inſerted in the preſent editions of the London and Edinburgh Pharmacopœias, but a number of older names, once generally eſtabliſhed, and ſtill occaſionally uſed.

TABLE I.

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Acetum vini	Acidum acetoſum	
Acidum vitriolicum	——— ſulphuricum	
——— vitrioli aromaticum	——— ——— aromaticum	
——— ——— dilutum	——— ——— dilutum	

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Ærugo æris	Sub-acetis cupri	
Æthiops mineralis	Sulphuretum hydrargyri nigrum	Hydrargyrus cum ſulphure
Æther vitriolicus	Æther ſulphuricus	
Aqua ammoniæ	Aqua carbonatis ammoniæ	
—— ——— acetatæ	—— acetitis ammoniæ	
—— ——— cauſticæ	—— ammoniæ	Aqua ammoniæ puræ
—— cinnamomi ſpirituoſa	Spiritus cinnamomi	Spiritus cinnamomi
—— cupri vitriolati compoſita	Solutio ſulphatis cupri compoſita	
—— fortis	Acidum nitroſum dilutum	Acidum nitroſum dilutum
—— juniperi compoſita	Spiritus juniperi communis compoſitus	Spiritus juniperi compoſitus
—— lixivia cauſtica	Aqua potaſſæ	Aqua kali puri
—— menthæ piperitidis ſpirituoſa	Spiritus menthæ piperitæ	Spiritus menthæ piperitidis
—— ——— vulgaris ſpirituoſa		——— ——— ſativæ
—— piperis Jamaicenſis	Aqua myrti pimentæ	Aqua pimento
—— pulegii ſpirituoſa		Spiritus pulegii
—— ſappharina		Aqua cupri ammoniati
—— ſeminum aniſi compoſita		Spiritus aniſi compoſitus
—— ſtyptica	Solutio ſulphatis cupri compoſita	
—— vitriolica camphorata		Aqua zinci vitriolati cum camphora
Alkali fixum foſſile	Soda	Natron
—— ——— vegetabile	Potaſſa	Kali purum
—— volatile	Ammonia	Ammonia

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Alumen	Sulphas aluminæ	
——— uſtum	——— ——— exſiccatus	
Ammonia præparata	Carbonas ammoniæ	
Antimonium	Sulphuretum antimonii	
——— præparatum	——— ——— præparatum	
——— calcareo-phoſphoratum	Oxidum antimonii cum phoſphate calcis	Pulvis antimonialis
——— muriatum	Murias antimonii	
——— tartariſatum	Tartris antimonii	
——— vitrificatum	Oxidum antimonii cum ſulphure vitrificatum	
Argentum nitratum	Nitras argenti	
Balſamum anodynum	Tinctura ſaponis cum opio	
——— ſaponaceum	Tinctura ſaponis	Linimentum ſaponis compoſitum
——— ſulphuris	Oleum ſulphuratum	Oleum ſulphuratum
——— traumaticum	Tinctura benzoes compoſita	Tinctura benzoes compoſita
Butyrum antimonii	Murias antimonii	Antimonium muriatum
Calomelas	Sub-murias hydrargyri	
Calx antimonii nitrata		Antimonium calcinatum
Cauſticum commune acerrimum	Potaſſa	Kali purum
——— ——— mitius	Potaſſa cum calce	Calx cum kali puro

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Cauſticum lunare	Nitras argenti	Argentum nitratum
Ceruſſa	Oxidum plumbi album	
Ceruſſa acetata	Acetis plumbi	
Cinnabaris factitia	Sulphuretum hydrargyri rubrum	Hydrargyrum ſulphuratum rubrum
Coagulum aluminoſum		Cataplaſma aluminis
Confectio cardiaca	Electuarium aromaticum	Confectio aromatica
———— japonica	Electuarium catechu	
Crocus antimonii, vel crocus metallorum	Oxidum antimonii cum ſulphure per nitratem potaſſæ	
Cuprum ammoniacum	Ammoniaretum cupri	
——— vitriolatum	Sulphas cupri	
Decoctum album		Decoctum cornu cervi
——— chamæmeli, vel commune	Decoctum anthemidis nobilis	
Decoctum lignorum	——— guaiaci compoſitus	
——— pectorale		——— hordei compoſitum
Elaterium	Succus ſpiſſatus momordicæ elaterii	
Electuarium lenitivum	Electuarium caſſiæ ſennæ	Electuarium ſennæ
——— thebaicum	——— opiatum	Confectio opiata
Elixir aloes		Tinctura aloes compoſita
——— guaiacinum	Tinctura guaiaci	
——— paregoricum	——— opii ammoniata	——— opii camphorata

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Elixir proprietatis	Tinctura aloes cum myrrha	Tinctura aloes compoſita
——— vitriolicum	——— aloes ætherea	
——— ſacrum	——— rhei cum aloe	
——— ſalutis	——— caſſiæ ſennæ compoſita	——— ſennæ
——— ſtomachicum	——— gentianæ compoſita	——— gentianæ compoſitum
——— vitrioli acidum	Acidum ſulphuricum aromaticum	
Emplaſtrum adhæſivum	Emplaſtrum reſinoſum	Emplaſtrum lithargyri cum reſina
Emplaſtrum attrahens	——— ſimplex	——— ceræ compoſitum
——— cephalicum		——— picis burgundicæ compoſitum
——— cereum	——— ſimplex	——— ceræ compoſitum
——— commune	——— oxidi plumbi ſemivitrei	——— lithargyri
——— cum gummi	——— gummoſum	——— lithargyri compoſit.
——— e cumino		——— cumini
——— lithargyri	——— oxidi plumbi ſemivitrei	
——— compoſitum	——— ferri rubri	
——— roborans	——— ferri rubri	——— thuris compoſitum
——— ſtomachicum		——— ladani ———
——— veſicatorium	——— meloes veſicatorii	——— cantharidis
Emulſio communis	Emulſio amygdalæ communis	Lac amygdalæ
Extractum catharticum		Extractum colocynthidis compoſitum

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Extractum thebaicum		Opium purificatum
Ferri rubigo	Carbonas ferri præparatus	
—— ſquamæ	Ferri oxidum nigrum	
Ferrum ammoniatum	Murias ammoniæ et ferri	Ferrum ammoniacale
——— vitriolatum	Sulphas ferri	
——— ——— uſtum	Oxidum ferri rubrum	
Flores benzoini	Acidum benzoicum	Flores benzoes
—— martiales	Murias ammoniæ et ferri	Ferrum ammoniacale
—— ſulphuris	Sulphur ſublimatum	Sulphur ſublimatum
—— zinci	Oxidum zinci	Zincum calcinatum
Fotus communis		Decoctum pro fomento
Hepar ſulphuris	Sulphuretum potaſſæ	Kali ſulphuratum
Hiera picra		Pulvis aloes cum canella
Hydrargyrus acetatus	Acetis hydrargyri	
——— muriatus corroſivus	Murias hydrargyri	Hydrargyrus muriatus
——— ——— mitis	Sub-murias hydrargyri	Calomelas
——— ——— præcipitatus	——— ——— præcipitatus	Hydrargyrus muriatus mitis
——— nitratus ruber	Oxidum hydrargyri per acidum nitricum	
——— præcipitatus cinereus	Oxidum hydrargyri cinereum	
——— ſulphuratus niger	Sulphuretum hydrargyri nigrum	Hydrargyrus cum ſulphure

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Hydrargyrus vitriolatus flavus	Sub-ſulphas hydrargyri flavus	Hydrargyrus vitriolatus
Infuſum amarum	Infuſum gentianæ luteæ compoſitum	Infuſum gentianæ compoſitum
——— roſarum	Infuſum roſæ gallicæ	——— roſæ
——— ſennæ communis		——— ſennæ tartariſatum
Julepum e camphora		Miſtura camphorata
——— e creta		——— cretacea
——— e moſcho		——— moſchata
Lac ſulphuris		Sulphur præcipitatum
Laudanum liquidum	Tinctura opii	Tinctura opii
Linimentum album		Unguentum ſpermatis ceti
——— anodynum	Tinctura ſaponis cum opio	
——— aquæ calcis	Oleum lini cum calce	
——— opiatum	Tinctura ſaponis cum opio	Linimentum ſaponis cum opio
——— ſaponaceum	Tinctura ſaponis	
——— volatile	Oleum ammoniatum	Linimentum ammoniæ
Lithargyrus	Oxidum plumbi ſemivitreum	
Lixiva acetata	Acetis potaſſæ	Kali acetatum
——— e tartaro	Carbonas potaſſæ puriſſimus	—— præparatum
——— purificata	——— potaſſæ	—— ———
——— tartariſata	Tartris potaſſæ	—— tartariſatum
——— vitriolata	Sulphas potaſſæ	—— vitriolatum

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND PH.
Lixiva vitriolata ſulphurea	Sulphas potaſſæ cum ſulphure	
Lixivium cauſticum	Aqua potaſſæ	Aqua kali puri
——— ſaponarium		—— —— puri
——— tartari		—— —— præparati
Magneſia alba	Carbonas magneſiæ	
——— uſta	Magneſia	
——— vitriolata	Sulphas magneſiæ	
Mel Ægyptiacum		Oxymel æruginis
—— roſaceum		Mel roſæ
Mercurius	Hydrargyrus	Hydrargyrus
——— calcinatus		——— calcinatus
——— corroſivus ſublimatus	Murias hydrargyri	——— muriatus
——— ——— ruber	Oxidum hydrargyri rubrum per acidum nitricum	
——— præcipitatus ruber		——— nitratus ruber
——— dulcis ſublimatus	Sub-murias hydrargyri	Calomelas
——— emeticus flavus	Sub-ſulphas hydrargyri	Hydrargyrus vitriolatus
——— præcipitatus albus		Calx hydrargyri alba
Minium	Oxidum plumbi rubrum	
Nitrum	Nitras potaſſæ	
Oleum tartari		Aqua kali præparati
Oxymel ſimplex		Mel acetatum

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Philonium Londinenſe		Confectio opiata
Pilulæ cupri	Pilulæ ammoniareti cupri	
—— gummoſæ		Pilulæ galbani compoſita
—— rufi	—— aloes cum myrrha	—— aloes cum myrrha
—— thebaicæ	—— —— opiatæ	—— opii
Potio cretacea	Potio carbonatis calcis	Miſtura cretacea
Pulvis antimonialis	Oxidum antimonii cum phoſphate calcis	
Pulvis e bolo compoſitus		Pulvis cretæ compoſitus
—— —— —— cum opio		—— —— —— cum opio
—— e ceruſſa compoſitus		—— ceruſſæ
—— cretaceus	Pulvis carbonatis calcis compoſitus	Pulvis cretæ compoſitus
—— doveri	—— ipecacuanhæ et opii	—— ipecacuanhæ compoſitus
—— ſternutatorius	—— aſari compoſitus	—— aſari compoſitus
—— ſtypticus	—— ſulphatis aluminæ compoſitus	
Rob baccarum ſambuci		Succus baccæ ſambuci ſpiſſatus
Rubigo ferri præparata	Carbonas ferri præparatus	
Saccharum ſaturni	Acetis plumbi	Ceruſſa acetata
Sal abſinthii	Carbonas potaſſæ	Kali præparata
—— alkalinus fixus foſſilis	Carbonas ſodæ	Natron præparatum

OLD NAMES.	NAMES IN THE ED: PH:	NAMES IN THE LOND: PH:
Sal alkalinus fixus vegetabilis	Carbonas potaſſæ	Kali præparatum
— ammoniacus	Murias ammoniæ	
— ——— ——— volatilis	Carbonas ammoniæ	Ammonia præparata
— catharticus amarus	Sulphas magneſiæ	Magneſia vitriolata
— ————— ——— glauberi	Sulphas ſodæ	Natron vitriolatum
— cornu cervi	Carbonas ammoniæ	
— diureticus	Acetis potaſſæ	Kali acetatum
— glauberi	Sulphas ſodæ	Natron vitriolatum
— marinus	Murias ſodæ	
— martis	Sulphas ferri	Ferrum vitriolatum
— polychreſtus	Sulphas potaſſæ cum ſulphure	
— rupellenſis	Tartris potaſſæ et ſodæ	Natron tartariſatum
— tartari	Carbonas potaſſæ	Kali præparatum
Soda purificata	Carbonas ſodæ	Natron præparatum
—— muriata	Murias ſodæ	
—— phoſphorata	Phoſphas ſodæ	
—— tartariſata	Tartris potaſſæ et ſodæ	Natron tartariſatum
—— vitriolata	Sulphas ſodæ	Natron vitriolatum
Species aromaticæ	Pulvis aromaticus	Pulvis aromaticus
Spiritus ætheris vitriolici	Æther ſulphuricus cum alcohole	
——— ammoniæ	Alcohol ammoniatum	
——— ——— aromaticus	——— ———— aromaticum	Spiritus ammoniæ compoſitus
——— ——— fœtidus	——— ———— fœtidum	——— ——— fœtidus
——— — cornu cervi	Aqua carbonatis ammoniæ	Liquor volatilis cornu cervi

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Spiritus mindereri	Aqua acetitis ammoniæ	Aqua ammoniæ acetatæ
——— nitri dulcis	Spiritus ætheris nitroſi	Spiritus ætheris nitroſi
——— ——— glauberi	Acidum nitroſum	Acidum nitroſum
——— ſalis ammoniaci	Aqua ammoniæ	Aqua ammoniæ
——— ——— dulcis	Alcohol ammoniatum	Spiritus ammoniæ
——— ——— marini glauberi	Acidum muriaticum	Acidum muriaticum
——— vinoſus camphoratus	Tinctura camphoræ	Spiritus camphoratus
——— ——— rectificatus	Alcohol	Alcohol
——— ——— tenuior	Alcohol dilutum	
——— vitrioli dulcis	Æther ſulphuricus cum alcohole	Spiritus ætheris vitriolici
——— volatilis aromaticus	Alcohol ammoniatum aromaticum	Spiritus ammoniæ compoſitus
——— ——— fœtidus	——— ——— fœtidum	——— ——— fœtidus
Succi ſcorbutici	Succus cochleariæ officinalis compoſitus	Succus cochleariæ compoſitus
Sulphur antimonii præcipitatum	Sulphuretum antimonii præcipitatum	
——— auratum antimonii		
Syrupus balſamicus	Syrupus toluiferæ balſami	Syrupus tolutanus
——— e meconio	——— papaveris ſomniferi	——— papaveris albi
Tabellæ cardialgiæ		Trochiſci cretæ
Tartarus crudus	Super-tartris potaſſæ impurus	
Tartari cryſtalli	Super-tartris potaſſæ	
Tartarus emeticus	Tartris antimonii	Antimonium tartariſatum
Tartarum ſolubile	Tartris potaſſæ	Kali tartariſatum

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Tartarum vitriolatum	Sulphas potaſſæ	Kali vitriolatum
Tinctura aloes vitriolata	Tinctura aloes ætherea	
——— amara	——— gentianæ compoſita	Tinctura gentianæ compoſita
——— aromatica	——— lauri cinnamomi compoſita	Tinctura cinnamomi compoſita
——— corticis peruviani volatilis		——— cinchonæ ammoniatæ
——— ferri	——— muriatis ferri	——— ferri muriati
——— fœtida	——— aſſæfætidæ	——— aſſæfætidæ
——— guaiacina volatilis	——— guaiaci ammoniata	——— guaiaci
——— japonica	——— mimoſæ catechu	——— catechu
——— martis	——— muriatis ferri	——— ferri muriati
——— melampodii	——— hellebori nigri	——— hellebori nigri
——— rhei amari	——— rhei cum gentiana	
——— roſarum	Infuſum roſarum	Infuſum roſæ
——— ſacra	Vinum aloes ſocotorinæ	Vinum aloes
——— ſtomachica		Tinctura cardamomi compoſita
——— thebaica	Tinctura opii	——— opii
——— tolutana	——— toluiferæ balſami	
——— valerianæ volatilis		——— valerianæ ammoniata
Trochiſci arabici	Trochiſci gummoſi	
——— bechici albi		Trochiſci amyli
——— ——— nigri	Trochiſci glycyrrhizæ	——— glycyrrhizæ
Turpethum minerale	Sub-ſulphas hydrargyri flavus	Hydrargyrus vitriolatus
Unguentum album	Unguentum oxidi plumbi albi	Unguentum ceræ

OLD NAMES.	NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.
Unguentum baſilicum flavum	Unguentum reſinoſum	Unguentum reſinæ flavæ
——— cœruleum	——— hydrargyri	——— hydrargyri
——— citrinum	——— nitratis hydrargyri	——— hydrargyri nitrati
——— epiſpaſticum fortius	——— pulveris meloes veſicatorii	Ceratum cantharidis
——— ——— mitius	——— infuſi mel. veſicat.	Unguentum cantharidis
——— e mercurio præcipitato		——— calcis hydrargyri albi
——— ſaturninum	——— acetitis plumbi	——— ceruſſæ acetatæ
——— ſimplex		——— adipis ſuillæ
——— ad veſicatoria		——— cantharidis
Vinum amarum	Vinum gentianæ compoſitum	
——— antimoniale	——— tartritis antimonii	Vinum antimonii
——— chalybeatum		——— ferri
Vitriolum album	Sulphas zinci	Zincum vitriolatum
——— cœruleum	——— cupri	Cuprum vitriolatum
——— viride	——— ferri	Ferrum vitriolatum
Vitrum antimonii	Oxidum antimonii cum ſulphure vitrificatum	Antimonium vitrificatum
Zincum uſtum	Oxidum zinci	Zincum calcinatum
——— vitriolatum	Sulphas zinci	

TABLE II.

NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.	OLD NAMES.
Acetis hydrargyri		Hydrargyrus acetatus
—— plumbi	Ceruſſa acetata	Saccharum ſaturni
—— potaſſæ	Kali acetatum	Sal diureticus Lixiva acetata
Acidum acetoſum		Acetum vini
—— benzoicum	Flores benzoes	Flores benzoini
—— nitroſum dilutum	Acidum nitroſum dilutum	Aqua fortis
—— ſulphuricum		Acidum vitriolicum
—— —— aromaticum		Acidum vitrioli aromaticum Elixir vitrioli acidum
—— —— dilutum		Acidum vitrioli dilutum
Æther ſulphuricus		Æther vitriolicus
Alcohol	Alcohol	Spiritus vinoſus rectificatus
Alcohol ammoniatum		Spiritus ammoniæ
—— —— aromaticum	Spiritus ammoniæ compoſitus	—— —— aromaticus
—— —— fœtidum	—— —— fœtidus	—— —— fœtidus
Ammonia	Ammonia	Alkali volatile

NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.	OLD NAMES.
Ammoniaretum cupri		Cuprum ammoniacum
Aqua acetitis ammoniæ	Aqua ammoniæ acetatæ	Spiritus mindereri
—— ammoniæ	—— —— puræ	Aqua ammoniæ cauſticæ
—— carbonatis ammoniæ	Liquor volatilis cornu cervi	Spiritus cornu cervi Aqua ammoniæ
—— myrti pimentæ	Aqua pimento	—— piperis Jamaicenſis
—— potaſſæ	—— kali puri	—— lixivia cauſtica Lixivium cauſticum
Carbonas ammoniæ	Ammonia præparata	Sal ammoniacus volatilis —— cornu cervi
—— calcis	Creta alba	Creta alba Lapilli cancrorum
—— ferri præparatus		Rubigo ferri præparata
—— magneſiæ		Magneſia alba
—— potaſſæ	Kali præparatum	Sal alkalinus fixus vegetabilis —— tartari
—— —— puriſſimus		Lixiva e tartaro
—— ſodæ	Natron præparatum	Sal alkalinus fixus foſſilis Soda purificata
—— zinci impurus	Lapis calaminaris	Lapis calaminaris
Decoctum anthemidis nobilis		Decoctum chamæmeli, vel commune
—— guaiaci compoſitus		—— lignorum

NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.	OLD NAMES.
Electuarium aromaticum	Confectio aromatica	Confectio cardiaca
——— ——— caſſiæ ſennæ	Electuarium ſennæ	Electuarium lenitivum
——————— catechu		Confectio japonica
——————— opiatum	Confectio opiata	Electuarium thebaicum
Emplaſtrum meloes veſicatorii	Emplaſtrum cantharidis	Emplaſtrum veſicatorium
——————— oxidi ferri rubri		——————— roborans
——— ——— plumbi ſemivitrei	——————— lithargyri	Emplaſtrum commune ——————— lithargyri
——————— reſinoſum	——————— lithargyri cum reſina	Emplaſtrum adhæſivum
——————— ſimplex	——————— ceræ compoſitum	——————— cereum
Emulſio amygdalæ communis	Lac amygdalæ	Emulſio communis
Murias ammoniæ		Sal ammoniacus
——— ——— et ferri	Ferrum ammoniacale	Ferrum ammoniatum Flores martiales
——— antimonii	Antimonium muriatum	Butyrum antimonii
——— hydrargyri	Hydrargyrus muriatus	Hydrargyrus muriatus corroſivus
——— ſodæ		Soda muriata Sal marinus
Nitras argenti	Argentum nitratum	Cauſticum lunare
——— potaſſæ		Nitrum
Oleum ammoniatum	Linimentum ammoniæ	Linimentum volatile

NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.	OLD NAMES.
Oleum lini cum calce		Linimentum aquæ calcis
—— — ſulphuratum	Oleum ſulphuratum	Balſamum ſulphuris
Oxidum antimonii cum phoſphate calcis	Pulvis antimonialis	Antimonium calcareo-phoſphoratum
Oxidum antimonii cum ſulphure per nitratem potaſſæ		Crocus antimonii, vel crocus metallorum
Oxidum antimonii cum ſulphure vitrificatum	Antimonium vitrificatum	Vitrum antimonii
Oxidum ferri nigrum		Ferri ſquamæ
—— —— —— rubrum		Ferrum vitriolatum uſtum
——— hydrargyri per acidum nitricum		Hydrargyrus nitratus ruber
———hydrargyri cinereum		———— præcipitatus cinereus
——— plumbi album		Ceruſſa
——— ——— rubrum		Minium
——— ——— ſemivitreum		Lithargyrus
——— zinci	Zincum calcinatum	Zincum uſtum Flores zinci
——— —— impurum		Tutia
Phoſphas ſodæ		Soda phoſphorata
Potaſſa	Kali purum	Alkali fixum vegetabile Cauſticum commune acerrimum
——— cum calce	Calx cum kali puro	Cauſticum commune mitius

NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.	OLD NAMES.
Potio carbonatis calcis	Miſtura cretacea	Potio cretacea
Pulvis carbonatis calcis compoſitus	Pulvis cretæ compoſitus	Pulvis cretaceus
Soda	Natron	Alkali fixum foſſile
Solutio ſulphatis cupri compoſita		Aqua ſtyptica
Spiritus ætheris nitroſi	Spiritus ætheris nitroſi	Spiritus nitri dulcis
——— cinnamomi	——— cinnamomi	Aqua cinnamomi ſpirituoſa
Sub-acetis cupri		Ærugo æris
Sub-murias hydrargyri	Calomelas	Calomelas Hydrargyrus muriatus mitis
Sub-ſulphas hydrargyri flavus	Hydrargyrus vitriolatus	Turpethum minerale
Succus ſpiſſatus momordicæ elaterii		Elaterium
——— cochleariæ officinalis compoſitus	Succus cochleariæ compoſitus	Succi ſcorbutici
Sulphas aluminæ		Alumen
——— cupri	Cuprum vitriolatum	Vitriolum cœruleum
——— ferri	Ferrum vitriolatum	Sal martis Vitriolum viride
——— magneſiæ	Magneſia vitriolata	Sal catharticus amarus
——— potaſſæ	Kali vitriolatum	Tartarum vitriolatum Lixiva vitriolata
——— potaſſæ cum ſulphure		Sal polychreſtus
——— ſodæ	Natron vitriolatum	Soda vitriolata Sal glauberi

NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.	OLD NAMES.
Sulphas zinci	Zincum vitriolatum	Vitriolum album
Sulphur ſublimatum	Sulphur ſublimatum	Flores ſulphuris
Sulphuretum antimonii		Antimonium
——— antimonii præcipitatum		Sulphur antimonii præcipitatum ——— auratum antimonii
——— hydrargyri nigrum	Hydrargyrus cum ſulphure	Æthiops mineralis
——— ——— rubrum	Hydrargyrum ſulphuratum rubrum	Cinnabaris factitia
——— potaſſæ	Kali ſulphuratum	Hepar ſulphuris
Syrupus toluiferæ balſami	Syrupus tolutanus	Syrupus balſamicus
Super-tartris potaſſæ		Tartari cryſtalli
Tart antimonii	Antimonium tartariſatum	Tartarus emeticus
——— potaſſæ	Kali tartariſatum	Tartarum ſolubile Lixiva tartariſata
——— potaſſæ et ſodæ	Natron tartariſatum	Soda tartariſata Sal rupellenſis
Tinctura benzoes compoſita	Tinctura benzoes compoſita	Balſamum traumaticum
——— camphoræ	Spiritus camphoratus	Spiritus vinoſus camphoratus
——— mimoſæ catechu	Tinctura catechu	Tinctura japonica
——— muriatis ferri	——— ferri muriati	——— ferri ——— martis
——— opii ammoniata	——— opii camphorata	Elixir paregoricum

NAMES IN THE ED. PH.	NAMES IN THE LOND. PH.	OLD NAMES.
Tinctura ſaponis		Linimentum ſaponaceum
——— ſaponis cum opio	Linimentum ſaponis cum opio	——— opiatum ——— anodynum
——— toluiferæ balſami		Tinctura tolutana
Unguentum acetitis plumbi		Unguentum album
——— nitratis hydrargyri		——— citrinum
——— oxidi plumbi albi	Unguentum ceruſſæ acetatæ	——— ſaturninum
——— pulveris meloes veſicatorii	Ceratum cantharidis	——— epiſpaſticum fortius
——— reſinoſum	Unguentum reſinæ flavæ	——— baſilicum flavum
Vinum tartritis antimonii	Vinum antimonii	Vinum antimoniale

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